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SANTA CLARA VALLEY WATER DISTRICT

AB 549
BENEFIT ASSESSMENT
FOR
FLOOD MANAGEMENT IN SANTA CLARA COUNTY

by

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TABLE OF CONTENTS

Page

SUMMARY 1

BACKGROUND 6

Authority 6
Purpose 6
Concept 7
Precedents 7
Limitations 8
  Proposition 13 8
  AB 8 (Greene) 9
  Proposition 4 (Gann) 9
  Majority Protest Act 10
Implementation Procedures (Election) 10
  Filing a Report 11
  Notice of Hearing 11
  Public Hearing 11
  Adoption of Ordinance and Resolution 11
  Delivery of Assessment Roll to Auditor-Controller 12
  Collection of Assessment along with Tax Collection 12
  Confirmation Election 12
CEQA 12

THE NEED FOR ADDITIONAL FUNDS 13

The Flood Problem 13
The Cost of Flood Management 15
Assumptions in Projecting Future Program Needs 16
  Federally Assisted Projects 16
  Rate of Project Production and Potential Flood Damage Reduction 16
Projection of Flood Management Program Needs 20
  Planning 20
  Construction 21
  Operations and Maintenance 22
  Administration 23
  Total Program Costs 24
Present Income 24
  The Effects of Proposition 13 30
Future Available Income 32
Need vs. Income - The Shortfall 33
Alternative Levels of Supplemental Funding 33

Page

COMPUTATION OF PARCEL ASSESSMENTS 39

Computation Method 39
Number of Assessment Units in Santa Clara County 42
Estimates of Possible Parcel Assessment Rates for Flood Management in Santa Clara County 43
Alternative A 43
Alternative B 45
Alternative C 46
Alternative D 46
Uniform vs. Non-Uniform Zone Rates 47
Recommended Alternative 48

THE ELECTION REQUIREMENT 50

District vs. Zone Elections 50
Election Scheduling 50

COST TO IMPLEMENT BENEFIT ASSESSMENT 52

Data Acquisition Costs 52
Data Augmentation and Verification Costs 52
Parcel Land Uses 53
Parcel Areas 53
Assessment Roll Generation Costs 53
Assessment Collection Costs 54
Election Costs 54
Districtwide Election 54
Zone Elections 55
Total Costs 55

OTHER CONSIDERATIONS 56

CONCLUSIONS AND RECOMMENDATIONS 59

SCHEDULE 61

FIGURES

Figure 1 Flood Management Program Needs vs Income 1981 through 1991 26-29
Figure 2 Flood Control Tax Income FY 76/77 through FY 80/81 31
Figure 3 Proposed Schedule 62

Page

TABLES

Table 1 Summary of Potential Flood Damages 14
Table 2 Federal Flood Control Projects in Santa Clara County 17
Table 3 Reduction in Potential One-Percent Flood Damages 19
Table 4 Annual Flood Management Program Needs 25
Table 5 Estimated Flood Management Income 1981-82 32
Table 6 Reallocated Annual Flood Management Program Needs 36
Table 7 Estimated Flood Management Income Under Funding Alternative D 37
Table 8 Santa Clara County Inventory of Parcels According to Six Land Use Categories (1980) 41
Table 9 Total Available Assessment Units 42
Table 10 Assessment Rates to Support a Desired Flood Management Program (Alternative A) 44
Table 11 Assessment Rates to Recovery Pre-Prop. 13 Tax Revenue Level (Alternative B) 45
Table 12 Assessments Rates to Support Operations, Maintenance and Administration (Alternative C) 46
Table 13 Assessment Rates to Support a Flood Management Program (Alternative D) 49

SUMMARY

This report describes the inadequacy of present flood control income to conduct an effective flood management program in Santa Clara County. The report recommends that the Board of Directors of the Santa Clara Valley Water District supplement existing flood management revenues within each of the five flood control zones by implementing a benefit assessment under the provisions of State law that became effective in July, 1979 (AB549, Frazee).

The report describes the flood damage potential within our District to be of disastrous proportions. Of the 667 miles of creeks and channels within District jurisdiction, only 306 miles can carry the one percent flood flow today without overbanking. In the event of a one percent flood today, over 76,000 acres of mostly developed land would be flooded, with estimated damages in excess of $400 million Districtwide. These potential damages will increase annually as property values increase. Countywide, a one percent flood today would inundate about 45,000 single family residences as well as many millions of dollars worth of commercial and industrial buildings and public facilities. The magnitude of this problem makes an active flood management program essential.

The District currently has a multi-faceted flood management program. Through District Ordinance 74-1, the Federal Insurance Program and through our review of land development proposals in the 15 cities and unincorporated areas, we try to ensure that development in floodplains is constructed so as not to be subject to future flooding. These District activities help to prevent adding to the thousands of single family homes and other structures presently exposed to flood damage.

Another facet of our flood management program is to protect the public's investment in the $150 million worth of flood control facilities which exist today, through a properly funded maintenance program. Our present commitment must be substantially enlarged so as to prevent any loss of effectiveness to the existing channel

system. Present land uses within areas formerly subject to flooding today rely upon the District's proper maintenance of its channels. Activities in our maintenance program include removal of weeds and tule growth, removal of silt, repair of erosion areas and raising of levees to account for subsidence.

A third major facet of our flood management program is the construction of new flood damage reduction facilities. We believe a goal of reducing potential flood damages 60% within the next 10 years is desirable.

Presently, these new flood control facilities are constructed under one of three programs: 1) federal projects, 2) developer constructed projects and 3) our own construction program. We believe all three of these categories must be continued if we are to reduce the existing flood damage potential in a reasonable time frame.

We have estimated that annual funds needed for our share of the above described flood management program total about $14.5 million (1981-82) in the five flood control zones, in addition to the present bond repayment income ($.96 million). We presently have about $6.3 million of income compared to $17.2 million if Proposition 13 were not in effect. The primary source of that income now is the District's pro-rata share of tax revenues under current State law. The District's tax revenue was reduced more than 55% after passage of Proposition 13 and the District's reserve funds have contributed to sustaining the program to date. Those reserves will be depleted in the current fiscal year, except for the reserves now earmarked for the District's share of future federal projects, and a minimal contingency fund in each flood control zone.

Without attempting to make up all of this funding shortfall, the benefit assessment approach (AB549) and reallocation (described below) of some of the proceeds from taxes can make major strides toward achieving our desired goal.

Another method of supplemental funding that has been considered is the adoption of ordinance fees. It is now recommended that such fees not be collected since the amount is small ($270,000) relative to our overall need, and the cost of collecting these fees could be high.

The benefit assessment approach (AB549) recommended here would spread the assessments in proportion to the amount of storm water runoff from each parcel. Assessments would be higher for more developed, runoff-efficient land uses (such as commercial and industrial) and less for undeveloped land uses (such as agricultural). There would be established a certain manageable number of categories of land uses with like runoff factors.

Under AB549, the Board may adopt a benefit assessment by resolution. Within one year after adoption, the continued levy of the assessment in subsequent years must be approved by the electorate (one time only). Assessments collected during the first year prior to the election need not be refunded in the event the ballot measure fails.

There are many Districtwide benefits associated with our ordinance administration and some of our general administrative programs presently funded on a zone basis. This is the case because many of the policies that control where and when development occurs are made at the County level and thus are not completely controlled by the residents of a particular flood control zone. The cost of our ordinance administration program is tied to activities associated with land development which are more intensive in zones of lower funding capacity and thus are unable to support desirable land use planning activities. Therefore, a method of spreading the cost of ordinance administration and other administrative costs on a Countywide basis is recommended.

Thus the recommendations of this report are:

1. Adopt a benefit assessment in all five flood control zones. We are recommending that the assessment rates be nearly uniform throughout the five zones. The assessment rates in the Northwest and North Central Zones would be reduced to reflect the bond repayment surcharge now in effect in those zones.

2. A fund be established to accept the total proceeds from taxes presently being allocated to each of the five flood control zones. The five-zone fund would then pay the

total flood control cost related to ordinance administration and other administrative projects. Annually, the balance left in this fund after funding these administration costs would be allocated back to each flood control zone in accordance with present allocation ratios among the zones in order to help support maintenance and damage reduction project activities.

3. It is recommended that the assessment be adopted by the Board of Directors no later than mid-July, 1981. The first year's assessment would be collected with the regular property tax collection in November, 1981 and in April, 1982. The required confirming election would be consolidated with the regularly scheduled June, 1982 primary ballot. The election would be Districtwide, not by zone, although the ordinance and confirming election would call for individual rates of assessment within each of the five flood control zones. Parcels outside of the five zones would not be assessed.

The following shows in table form the source of funds for the flood management program under the proposed supplemental funding.

Proposed Source of Funds (FY 81-82)
for
Flood Management Program
($ in millions)

	NW	NC	C	E	S	5-Zone Fund	Total
1. Tax Proceeds	$ .81	$1.10	$1.37	$1.18	$ .21	$ .80	$5.47
2. Interest	.20	.20	.21	.17	0	0	.78
3. Benefit Assessment	1.25	1.01	2.52	2.08	.35	0	7.21
4. Bond Repayment Tax Proceeds	.20	.76	0	0	0	0	.96
Total Flood Management Income	$2.46	$3.07	$4.10	$3.43	$ .56	$ .80	$14.42

The preliminary schedule of assessment rates by land uses are shown on the following table.

Preliminary Schedule of Assessment Rates

Zone	NW	NC	C	E	S	Approx. Number of Parcels
			Assessment Rates[1] ($/Acre per Year)			
Land Uses						
A. Commercial/ Industrial	81.20	54.00	94.50	94.50	94.50	14,400
B. Apts/Inst.	61.00	40.50	70.86	70.86	70.86	32,750
C. Single Family Small Mult. (2-4 units)	10.15[2]	6.75[2]	11.81[2]	11.81[2]	11.81[2]	286,950
D. Disturbed Rural Salt Ponds	.51	.34	.59	.59	.59	20,550
E. Undisturbed Agric. Marsh Lands	.30	.20	.35	.35	.35	6,850
Annual Income ($millions)	$1.25	$1.01	$2.52	$2.08	$.35	362,900

[1] Land uses A, B, D and E would have minimum assessments equal to 1/4 of the assessments shown. These minimum assessments would apply to .25 acre sites or smaller.

[2] 'C' category rates shown are not per acre. Rates shown are for .25 acre parcels or smaller. For areas larger than .25 acre, these land uses would be assessed at D rates.

Although the proposed supplemental funding is about $1 million short of the amount needed to fund the desired flood management program ($14.5 million), we believe that this proposal is realistic considering all factors (public acceptance, etc.). The funding of our construction program, coupled with presently identified federal projects, can reduce the flood damage potential by about 60% in the next 10 years.

BACKGROUND

Authority

The levying of a benefit assessment for flood control services is authorized by Chapter 10 (commencing with Section 60400), Division 2, Title 6, California Government Code. This chapter was added to the statutes by Assembly Bill 549 (Frazee), and was signed into law by Governor Brown on July 16, 1979.

Purpose

The purpose of benefit assessment is to supplement other available but limited revenues sufficiently to keep the existing flood protection system in a safe and effective condition, to perform maintenance and repair, to provide for needed new flood control construction and in general to provide all flood control services to the public.

The assessment program is based on the assumption that the Santa Clara Valley Water District will continue to receive its "pro rata" share of County revenue entitlements under the provisions of Article XIII A of the State Constitution and AB 8. This assumption is made because AB 549 provides in part that the Board of Directors may levy assessments "on the basis of estimated benefits sufficient to cover the cost not otherwise offset by other available revenue for providing flood control services within the District, or any zones thereof, . . . " Board policy presently provides that the District's pro rata tax revenue is to be allocated to the individual flood control zones in proportion to each zone's pre-Proposition 13 income. There is no legal requirement that tax revenues be so allocated - the Board may legally ignore zone boundaries with regard to tax revenues if the Board so choses.

AB 8 also includes a deflator clause which, in effect, states that if the State revenues in the future are not sufficient to allow the State to meet its commitment to special districts under provisions of the law relating to bail-out funds, then the District's share of revenue entitlements will also be reduced. The Santa Clara Valley Water District receives no bail-out monies from the State and so would be unaffected by that provision.

For 1981-82, the total anticipated revenues for the District and its zones from Article XIII A property taxes and other revenues is estimated to be approximately $6.3 million. It is proposed to levy an annual benefit assessment in each zone of the District in order to generate a total assessment revenue of approximately $7.2 million the first year. The $13.5 million income from these sources — in conjunction with federally funded projects and flood control projects constructed by developers — will provide for an effective flood management program.

Concept

As authorized by AB549, it is proposed to levy an assessment on each parcel of real property, except that an assessment shall not be imposed on a federal, state or local government agency. The assessment is to be levied in proportion to benefits received. The statute provides that benefits received "may be determined on the basis of the proportionate storm water runoff from each parcel".

To determine the proportionate storm water runoff from each parcel, it is necessary to know the area of the parcel and its "runoff factor". The area of the parcel can be determined from existing data. The runoff factor is a measure of the amount of water that will flow off a parcel compared to the amount of rainfall that falls on the parcel in relationship to other parcels. It is expressed as a decimal. Land used for lawn, agriculture, and similar uses has a low runoff factor. Land which has been developed by adding roofs, driveways, and other impervious areas has a higher runoff factor.

Precedents

Los Angeles County Flood Control District and Alameda County Flood Control and Water Conservation District have each recently levied a benefit assessment under AB 549. Pertinent facts relative to each are summarized on the following page.

Additionally, a benefit assessment election on November 4, 1980 passed in Santa Barbara County and failed in Ventura County and San Diego County.

AB 549 Benefit Assessment Programs In Los Angeles and Alameda Counties

		Los Angeles	Alameda
Date implemented by Board of Supervisors		August 21, 1979	September 25, 1979
Approved by voters		November 6, 1979	June 3, 1980
Election boundaries		Districtwide	Individual zones
Amount of assessment	1st Yr.	$20 million	$3.5 million
	2nd Yr.	$32 million	$4.17 million
Average cost per single family parcel	1st Yr.	$5.25	$10-13
	2nd Yr.	$7.71	$10-13
Total budget	1st Yr.	$34 million	$8.1 million
	2nd Yr.	$46 million	-
Assessment Rate Areas		Districtwide	9 zones, individual rates per zone
Land Use Categories Assessed		Eleven	Five
Approximate number of ownership parcels in District		1.9 million	230,000 (SCVWD contains 363,000 parcels±)
Limitation on annual increase in assessment (by Ordinance)		None	Consumer price index

Limitations

Possible limitations on the AB 549 provisions come from other legislation including Proposition 13, AB 8 (Greene), Proposition 4 (Gann) and the Special Assessment Investigation, Limitation and Majority Protest Act of 1931.

Proposition 13

Proposition 13 (Article XIII A of the State Constitution) was signed into law following its approval by the voters in June of 1978. The amendment limits the property tax burden on properties to 1% of full cash value and limits increases to 2 percent per year.

Limitation on Benefit Assessment: None. Because special assessments are not taxes, Proposition 13's provisions would not be violated by implementing AB 549 benefit assessments. The courts have established that special assessments are not taxes. One local attorney has suggested that those court cases (prior to AB 549) did not exclude maintenance assessments from the definition of taxes. His opinion is that AB 549 special assessments may be seen as a tax, to the extent that these assessments are used for maintenance, and may violate Article XIII A. Counsel advises that this view would not be supported by the courts and that assessments may be used for maintenance without being in violation of Proposition 13.

AB 8 (Greene)

AB 8 was signed into law in 1979, and sets forth the formula by which post-Proposition 13 revenue from local property tax is to be allocated among local government agencies. Under AB 8 each county continues to levy a tax of $4.00 per $100.00 of assessed value (one percent of full cash value).

Limitation on Benefit Assessment: None. AB 8 would not limit the District's capabilities under AB 549's benefit assessment. AB 8, in conjunction with Proposition 4's amendment of the State Constitution, speaks to property tax revenues. Benefit assessments are not property tax revenues.

Proposition 4 (Gann)

Proposition 4 (the Gann Initiative) became effective in June, 1980 after being successful on the November, 1979 election ballot. It provides for each local agency to establish an annual appropriation limit. The appropriation limit is predicated on the amount of base year revenue for the agency identified as "proceeds of taxes". Appropriations from revenue which are not tax proceeds are not subject to limitation. The appropriations limit for each agency is adjusted annually after the base year to account for certain factors such as changes in population and changes in the cost of living. The appropriations limit is also to be adjusted for certain changes in revenue sources and service responsibilities.

The District's 1980-81 flood control appropriation limit under Proposition 4 is computed to be $30,892,512. The District's actual appropriations subject to limitation in 1980-81 amount to $12,462,449. Thus, under the law, some additional $18,430,063 can be appropriated this year without exceeding the legal limitation. The appropriation limit imposed by Proposition 4 applies to the District as a whole. Counsel advises that the flood control zones do not have individual appropriation limits.

Limitation on Benefit Assessment: None. Because benefit assessments are not proceeds of taxes, these would not subtract from the Proposition 4 appropriation limit. Similarly, these would not subtract because assessments are considered to be an "augmentation" to the property tax allocation, not a "transferring" of revenue source from property tax to assessments.

Majority Protest Act

If applicable, this law would require that a copy of the report required under AB 549 be mailed to each property owner, permitting the protest of any who so wish. This would entail a great public expense. Owners of over one-half the area within the proposed assessment boundary may successfully protest the assessment, if the Act applies.

Limitation on Benefit Assessment: None. District Counsel believes this law does not apply to AB 549. Further opinion is forthcoming as to the law's applicability. To relieve any doubt, language has been drafted to amend the govenment code rendering the Act not applicable to AB 549.

Implementation Procedures

In accordance with the authorizing legislation, implementation of a benefit assessment requires the following actions, all but the last of which (the required election) would be required annually.

- Filing a report
- Notice of hearing
- Public hearing before the Board of Directors

- Adoption of Ordinance and resolution by Board of Directors
- Delivery of assessment roll to the Auditor-Controller
- Collection of the assessment along with the tax collection
- Within one year after the initial ordinance the question of whether the assessment shall be continued shall be put to the voters.

Filing a Report

The authorizing legislation requires that a written report be filed with the Clerk of the Board. The report would describe the District's benefit assessment program, the method used to determine the assessments and the District flood control activities for which the assessments would be collected. In addition, the report would incorporate the following by reference:

A. The official assessor map books and records of Santa Clara County.

B. The assessment rolls which would be developed and which would indicate the amount of the assessment for each parcel of property.

Notice of Hearing

Notice of time, date, and place of hearing on the report must be published pursuant to Section 6066 of the Government Code, and at least three notices shall be posted in public places within the area subject to assessments. The notice must be published at least two weeks before the public hearing. The proposed assessment roll would be made available to the public at this time.

Public Hearing

At the public hearing, the Board of Directors shall hear and consider all protests.

Adoption of Ordinance and Resolution

At the conclusion of the hearing, should the Board determine to levy an assessment, it would do so by adoption of an ordinance. It may adopt, revise, change, reduce, or modify any assessment and shall make its determination upon each assessment and thereafter, by resolution, shall confirm the assessments.

Delivery of Assessment Roll to Auditor-Controller

The assessment roll would have to be delivered to the Auditor-Controller by August 10 in the year in which it is adopted (1981) and every year thereafter, in order to be incorporated into the tax collection. The assessment roll would be delivered in the form of computer tapes containing all of the required information in the format specified by the Auditor-Controller.

Collection of Assessment along with Tax Collection

The assessment would be levied and collected at the same time and in the same manner as the general tax levy for County purposes. The cost to the District for this collection is discussed later in this report.

Confirmation Election

Within one year after the ordinance takes effect, the Board must place before the voters the question of whether the District shall be authorized to continue to levy the benefit assessment. The benefit assessment would be approved if a majority of those voting approve. The approval of the voters may be secured at a District or Countywide election at an election conducted only within the combined flood control zones, or at elections conducted individually by flood control zone. The question could be placed on the ballot at a general election, a special election or at the June, 1982 primary election. The primary election would be the least expensive method and it is the method recommended.

CEQA

Counsel advises that the provisions of the California Environmental Quality Act (CEQA), requiring the determination of environmental impacts of projects, does not apply to the establishment of a benefit assessment according to Section 21080 (b) (8) and (9) of the Public Resources Code. CEQA's provisions would apply at the time construction projects, funded through AB 549 assessments or other funds, are done.

THE NEED FOR ADDITIONAL FUNDS

Following is a description of the scope of the flood management program in Santa Clara County----the magnitude of the flood hazard, the level of program effort needed to reduce and eliminate flooding and related damages through construction of facilities and regulation of land development, and on-going operation and maintenance needs----and how present flood control revenues are inadequate to fund the required program.

The Flood Problem

The flood potential in Santa Clara County is of disastrous proportions. Of the 667 miles of creeks and channels in District jurisdiction, only 306 miles can carry the one percent flood flow today without overbanking. In the event of a one-percent flood today, over 76,000 acres of land would be flooded with estimated damages in excess of $400 million countywide. These total damages will increase annually as property values increase. Countywide, a one percent flood today would inundate approximately 45,000 single family residences, and many millions of dollars worth of apartments, mobile homes, commercial and industrial buildings and public facilities. Table 1 presents a summary of the flood problem by flood control zone.

In addition to potential flood damages, there is an on-going erosion problem Countywide which results in damages not only to watersheds but also to stream banks and stream bottoms during the annual rainfall season. Bank erosion must be controlled to protect adjoining properties. Upstream erosion causes sedimentation in baylands reaches of waterways, thus reducing the flood carrying capacity of these low-lying streams and increasing the flood hazard to adjoining properties. Erosion and sedimentation can greatly reduce the effectiveness of previously constructed flood control facilities unless a large effort is expended by the District each year to manage this.

Table 1
Summary of Potential Flood Damages
(1980)

						Properties Flooded				
Zone	Length of Creeks (Mi.)	Length of Inadequate Creeks (Mi.)	Average[1] Annual Damages	1% Damages	1% Area Flooded (Ac.)	Single Family Homes	Apts.	Mobile Homes	Comml/ Indust.	Public Facilities
						(Potential Damages)				
NW	91	54	$ 8,500,000	$172,000,000	12,000	$72 mil.	$7.4 mil.	$.40 mil.	$ 46.6 mil.	$45. mil.
NC	92	51	1,400,000	52,000,000	10,000	24 mil.	3.65	0	24	.5
C	99	48	4,600,000	104,000,000	16,000	29 mil.	.85	.45	71	2.5
E	209	97	3,600,000	96,000,000	18,000	43 mil.	4.40	1.50	46	1.4
S	176	111	600,000	12,100,000	20,000	5 mil.	.22	0	7	.06
Totals	667	361	$18,700,000 [2]	$436,000,000 [3]	76,000	$173 mil.	$16.52 mil.	$2.35 mil	$194.6 mil	$49.5 mil.

[1] Potential Average Annual Damages from 1% flooding. These values include some double counting of flood prone areas. When an area is flooded by more than one source, it is counted in this total for each source. For example, most areas subject to saltwater flooding are also subject to freshwater flooding. In this table, these areas would be counted for each source.

[2] Average annual damages from saltwater flooding account for $770,000 of the total shown (1980).

[3] 1% flood damages from saltwater flooding account for $25.4 million of the total shown (1980). The assessment program considered in this report would not provide for construction which would reduce potential damages from saltwater flooding.

[4] There are approximately 45,000 homes subject to flooding.

Similarly, the large annual expenditure required to operate and maintain previously constructed flood facilities—channels, levees, outfalls, tide gates, debris basins, dams and reservoirs, etc.—in order to preserve the multi-million dollar public investment in these and to ensure that they operate as intended, goes hand-in-hand with the ultimate solution to flood problems, as will be described. The replacement cost of the District's flood control facilities is $150 million at today's costs. This does not include the cost of replacing the dams which provide incidental flood damage reduction.

The Cost of Flood Management

Countywide, the total cost today to solve the fresh water flood problem described above would amount to nearly $320 million. Nearly two-thirds of this cost would be borne locally, by the District. The remaining cost is associated with projects presently under study by federal agencies, as described in later paragraphs.

Addressing the flooding and erosion problems in Santa Clara County involves several inter-related District programs. These are:

- Planning
- Construction
- Operation and Maintenance
- Administration

Combined, these programs strive either to eliminate flooding from developed areas — that is they strive to keep the hazard away from the potential damages to life and property — or to prevent development of properties within flood hazard areas—keeping the potential damages away from the hazard. In some cases, where providing flood protection to presently developed properties is not practical, the District may wish to address the hazard to life by providing flood warning to local authorities.

Assumptions In Projecting Future Program Needs

Estimating future funding needs for the District's flood management programs (to ultimately demonstrate the deficit needed to be made up by augmenting funds) must consider: (1) the District's future obligations with respect to sharing of costs in presently indentified federal flood control projects, and (2) for projects entirely of local (District) responsibility, the rate at which flood damage reduction projects can reasonably be expected to be planned, designed and constructed.

Federally Assisted Projects

The District's funding needs over the next several years must include an annual appropriation of funds to prepare for its portion of the non-federal share of federally sponsored projects. Under current law, the District would be responsible for a maximum of about 20 percent of the project cost. The Guadalupe River Project (Corps of Engineers) in the Central Zone and the Lower Silver Creek Project (Soil Conservation Service) in the East Zone are presently the only two federal freshwater projects which are to have a District cost sharing feature. The San Francisco Bay Shoreline Project, to possibly protect against saltwater inundation, is a Corps project which may involve the District in a major cost sharing. For purposes of estimating future needs, the District's possible share of costs of a saltwater flood protection program cannot be forecast. Table 2 itemizes the major features and costs of the federal flood control projects in Santa Clara County. The Table also demonstrates the added financial burden to the District in the event federal assistance does not occur; that is, assuming the projects are completed with local funds, rather than with federal funds as now scheduled.

Rate of Project Production and Potential Flood Damage Reduction

Given an adequate level of funding, the rate at which flood damage reduction measures can be implemented is controlled by the number of staff personnel available to plan and design needed projects. Also, the rate of production is influenced if staff

Table 2
Federal Flood Control Projects in Santa Clara County

Project	Zone	Date to Const.	Project Length (miles)	Total Est Cost (1980) ($ Millions)	Dist Share with Fed. Assistance ($ Millions)	Avail Now ($ Millions)	Annual Funds Needed ($ Millions)	Dist Share without Fed Assistance ($ Millions)	Avail Now ($ Millions)	Annual Funds Needed ($ Millions)
Llagas Ck.	S	1982-88	32	40	-0-	-	-	40	0	6.67
Uvas Ck.	S	1983	2	2.1	-0-	-	-	2.1	0	.70
Lower Silver Ck.	E	1984-86	3	14.3	0.3	0.3	0	14.3	0.3	3.6
Guadalupe River	C	1988-91	10.4	63	14	10	0.5	63	10	6.6
San Francisco Bay Shoreline	NW NC,C E	1991-95	34	- 1/	- 1/	0	-	N/A	N/A	N/A
	Totals			$119.40	$14.3	$10.3	$0.5 3/	$119.40	$10.3	$17.57 2/

1/ Cannot be estimated at this time.

2/ Annual need shown is over and above that required for construction of projects of District responsibility. The annual $500,000 shown to be saved for the Guadalupe River project would be required for eight years ending in 1989.

capability is augmented by design consultants—the number of consultants able to be coordinated at any one time being limited by staff available.

For purposes of projecting annual funding needs over the decade and beyond, the following assumptions are made with regard to staff/consultant capabilities:

- Present engineering design staff (8 engineers/technicians) are capable of supporting an annual construction program of $4 million to $5 million without consultant supplementation.
- Present staff could support an annual construction program of $7 million to $8 million with consultant supplementation. Staff capabilities would be reduced because of the added coordination responsibilities.
- Increasing present staff from 7 engineers and technicians to 14 would permit an annual construction program of $9 million to $11 million with consultant support.

A rate of $7 million per year could be a reasonable target for project implementation, assuming no increase in present Design Division staff, assuming existing staff is augmented by design consultants — and, assuming funds are available.

However, from the standpoint of reduction in potential flood damages Countywide, a detailed look at scheduling of individual projects according to their priority ranking shows that a rate of $6.4 million in construction per year would produce a 73% reduction in potential damages by 1991. As will be shown in the following sections, a construction rate of $6.4 million per year will require more funds than can be generated by present sources of flood control funds. In fact, it will be shown that the cost of administration, planning and maintenance would consume all available income, leaving no construction program, within the next 10 years.

Table 3 demonstrates how much reduction in potential one-percent flood damages can be achieved over the next ten years with a $6.4 million annual target project construction program (rather than the $7 million annual rate described above). As shown in the Table, continued federal participation in presently identified projects is crucial to effective flood damage reduction in the Central, East and South Zones. The table also shows the reduction in potential one percent flood damages (with and without federal projects) assuming no new funding source is found to permit the construction program described.

Table 3
Reduction in Potential
One-Percent Flood Damages Under
A $6.4 Million Annual Project Construction Program
(1981 through 1991)

	Without New Funds1/		With New Funds2/	
Zone	With Fed.3/ Projects	Without Fed. Projects	With Fed. Projects	Without Fed. Projects
Northwest	31 %	31 %	68 %	68 %
North Central	38	38	75	75
Central	96	24 4/	99	26
East	42	9	46	13
South	96 5/	0	96 5/	0
Combined Zones	54	38	73	44

1/ That is assuming no new funds beyond present and projected taxes, interest and miscellaneous sources of income.

2/ Assuming a new funding source is obtained to support an annual $6.4 million project construction program. Some of these projects would come under the maintenance program and others under new construction.

3/ Federal projects are: Guadalupe River, Lower Silver Creek, Llagas Creek and Uvas Creek. Presently there are no federal projects in the NW and NC zones.

4/ District presently has $10 million saved for its share of Guadalupe River project. Damage reduction shown assumes the $10 million would partially reduce the total $100 million damages estimated for that facility.

5/ Damage reduction shown in South Zone is mostly associated with Llagas Creek project. Without supplemental funds for the District, that federal project may not be feasible because of inadequate funds for District maintenance of the completed project.

Projection of Flood Management Program Needs

Following is a description of the level of program funding needed to support a desired flood management program. Projections of needed funds are made considering the constraints imposed by federal project requirements and rate of construction discussed in previous paragraphs.

The level of program funding needed is discussed in terms of annual dollars, to be compared later with available annual revenues. An annual deficit, or shortfall, will be shown when the comparison is made.

Planning

This program involves the annual planning of future flood management measures including:

- Preparing hearing plans and environmental reports for future flood management projects.
- Conducting public involvement programs during project formulation.
- Conducting special studies relative to land use policies, flood management funding studies and other special studies.
- Coordination with federal flood control studies.

In recent years, the District's planning section (Pre-Design Division) has been staffed to a minimum level (3-5 engineers). To support a $6.4 million annual project construction program, project planning must keep pace with project design, and adequate staff must be on hand for this purpose.

Consultant supplementation of in-house staff is less practical for project planning than for project design. The public involvement process leading to properly planned projects which can culminate in successful public hearings and Board adoption is best conducted by in-house staff drawing from in-house resources (District policies & ordinances) and who are capable of coordinating the planning process with the usual numerous public agencies.

In addition to the detailed planning of local flood damage reduction projects, the Pre-Design Division is responsible for the current Waterways Planning Study. This is a study aimed at developing a complete resource inventory for all waterways in Santa Clara County. Project planning must proceed parallel to this study, which is scheduled for completion in fiscal year 1983-84.

The Pre-Design Division will continue to have coordinating responsibilities with federal flood control studies, including the San Francisco Bay Shoreline Study (Corps), the Guadalupe River Study (Corps), the Uvas Creek Study (Corps) and the Lower Silver Creek Study (SCS). In addition, contract services are required for aerial mapping, soil testing, printing, binding, etc.

To support a $6.4 million annual construction program as well as the Waterways Planning Study and the coordinating functions described above would require a total of 10 engineers in the Pre-Design Division. In terms of 1980 costs, this would require an annual $650,000 Division budget. Table 4 shows this cost broken down by zone along with other program costs.

Construction

This program involves the design and construction of projects after these have been planned by the Pre-Design Division, including:

- Acquiring right of way
- Preparing detailed plans and specifications
- Soliciting bids and awarding contracts
- Administering contracts, including construction inspection

As discussed previously, present Design Division staff would not need to be enlarged, however approximately $3 to $4 million of the desired $6.4 million annual construction projects would need to be accomplished by outside design consultants. Table 4 shows annual construction needs by zone, together with other program costs, to support the proposed $6.4 million in annual construction. The $6.4 million is shown in Table 4 as the sum of $4.78 million in District projects and $1.62 million of Rehabilitation Measures.

Operations and Maintenance

These programs involve the on-going pre and post-construction activities needed to ensure operational reliability of facilities. There are a vast number of activities required under these programs. In general, they include the following categories:

- Maintaining flood control facilities from the effects of subsidence and other causes of reduction in flood carrying capacity.
- Removal of silt and debris from flood control channels, silt basins and reservoirs
- Maintaining and repairing access roads and ramps
- Maintaining District facilities from the effects of vandalism
- Maintaining District dams, tide gates and outlet works
- Collection of basic precipitation, stream flow and tide data
- Possible operation of a flood warning test system
- Providing flood emergency response

Unlike planning and construction activities which are funded over a relatively few number of years per project, operations and maintenance is needed annually before and after a given facility is constructed. To protect the public investment, maintenance of constructed facilities must be conducted more committedly than during pre-constructed years.

Today (1980-81) the maintenance program is funded to approximately $1.5 million annually. This figure is considered to be one-half of that actually needed today to properly maintain the District's flood control channels and related facilities. The maintenance program has been underfunded to permit funds to remain available for flood damage reduction projects under the construction program. The need for an increased maintenance budget is apparent by comparing the criteria used for project design (channel roughness, side and bottom slopes, access, etc.) with actual as-built conditions as early as one year after construction. Therefore, the one-percent flood design criterion does not, in many instances, result in one percent protection in the long-term. The problem is one of committing adequate staff and equipment annually to meet this huge maintenance responsibility.

For the $6.4 million annual construction under consideration, flood damage reduction facilities (channels, modified floodplains, etc.) would be implemented at the rate of approximately 12 miles per year, including the additional miles of channel provided through federal projects (Guadalupe River and Lower Silver Creek) and 7 miles per year without these federal projects. At today's average cost of $10,000 per mile to maintain channels (this actually varies widely depending on type and size of channel and whether the channel is in or out of tidal influence), maintenance needs will increase annually at the rate of $70,000 to $120,000 per year (in terms of 1980 dollars) beyond the expected annual inflationary effect. Table 4 present annual maintenance needs by zone and for combined zones.

Administration

This program provides support to the other District flood damage reduction programs, including:

- Conducting general administrative activities such as meetings, real estate administration, updating of manuals, etc.
- Providing public liability insurance for District flood damage reduction facilities.
- Updating and revising District standard specifications
- Applying and enforcing District Ordinance 74-1 as it involves the District annually in the review of over 2,400 land development applications and the issuing of over 400 permits and 400 flood letters.

- Funding repayment of bond principal and interest in the Northwest and North Central flood control zones (presently).

Districtwide, the Administration program presently costs approximately $900,000 per year. Increasing this 10% to allow for additional administrative needs for an increased construction program would put the annual cost of this program at about $1 million. For purposes of estimating future needs, a normal annual cost rise factor should be applied. Table 4 shows Administration program funds needed.

Total Program Costs

Figures 1 (a) through 1 (f) graph the annual cost of the recommended flood management program in Santa Clara County. Figures 1 (g) and 1 (h) show the annual needs if the District had the increased burden of saving funds for Guadalupe River and Lower Silver Creek (potential federal projects) as if it were to pay 100% of the construction costs. A graph showing the increased annual needs if the District were to fund 100% of the South Zone's Llagas and Uvas Creek projects (federal projects) would be similar to Figures 1 (g) and 1 (h).

Annual increases are shown in Figures 1 (a) through 1 (h) due in part to the 10% annual cost rise assumed, and also to the increased annual maintenance costs associated with each year's newly constructed facilities.

Present Income

Flood management costs for Santa Clara County, having been demonstrated in Table 4 and the graphs in Figures 1 (a) through 1 (h), must be compared with income - present and forecasted - to assess the need for another source of funds.

Income for flood management presently comes to the District from the following sources:

- Flood control taxes, allocated to the District under AB 8 provisions
- Interest
- Miscellaneous agreements and advances

Table 4
Annual Flood Management Program Needs
Beginning in 1981-82

	With Federal Projects 1/						Without Federal Projects 2/					
Zones	NW	NC	C	E	S	Combined Zones	NW	NC	C	E	S	Combined Zones
Programs	($ millions)						($ millions)					
Administration	.18	.20	.20	.24	.18	1.00	.18	.20	.20	.24	.18	1.00
Planning	.10	.15	.10	.20	.10	.65	.10	.15	.10	.20	.10	.65
Maintenance												
Routine Maintenance	.55	.55	.80	.80	.65	3.35	.55	.55	.80	.80	.65	3.35
Rehabilitation Meas.	.97	.75	1.05	.65	0	3.42	.97	.75	1.05	.65	0	3.42
Construction												
District Projects	1.23	1.25	.15	2.15	0	4.78 5/	1.23	1.25	.15	2.15	0	4.78 5/
Llagas Creek Fund	-	-	-	-	-	-	-	-	-	-	6.67	6.67
Uvas Creek Fund	-	-	-	-	-	-	-	-	-	-	.70	.70
Lower Silver Fund	-	-	-	-	-	-	-	-	-	3.60	-	3.60
Guadalupe River Fund 3/	-	-	.50	-	-	.50	-	-	6.60	-	-	6.60
Misc. 4/	.40	.07	.07	.11	.07	.72	.40	.07	.07	.11	.07	.72
Totals	$3.43	$2.97	$2.87	$4.15	$1.00	$14.42	$3.43	$2.97	$8.97	$7.75	$8.37	$31.49

1/ Federal participation anticipated in Guadalupe River and Lower Silver Creek projects (District share = 20% of project total), Llagas Creek and Uvas Creek (District share = 0).

2/ Funds needed assuming no federal participation in projects listed in Note 1, (District Share = 100%).

3/ Guadalupe River fund would require $.5 million/yr. to fund balance of District share ($14 million needed less $10 million now saved); $6.6 million/yr. would be needed for District to fund 100% of project by 1988.

4/ Miscellaneous needs include: Diericx Drive purchases in NW zone (through 1985); Ord. Construction; purchase of reserved right of way, and bridge cost sharing agreements.

5/ The total project construction need amounts to $6.40 million annually (1981-82). This is the sum of District projects ($4.78 million) and $1.62 million of Rehabilitation Measures.

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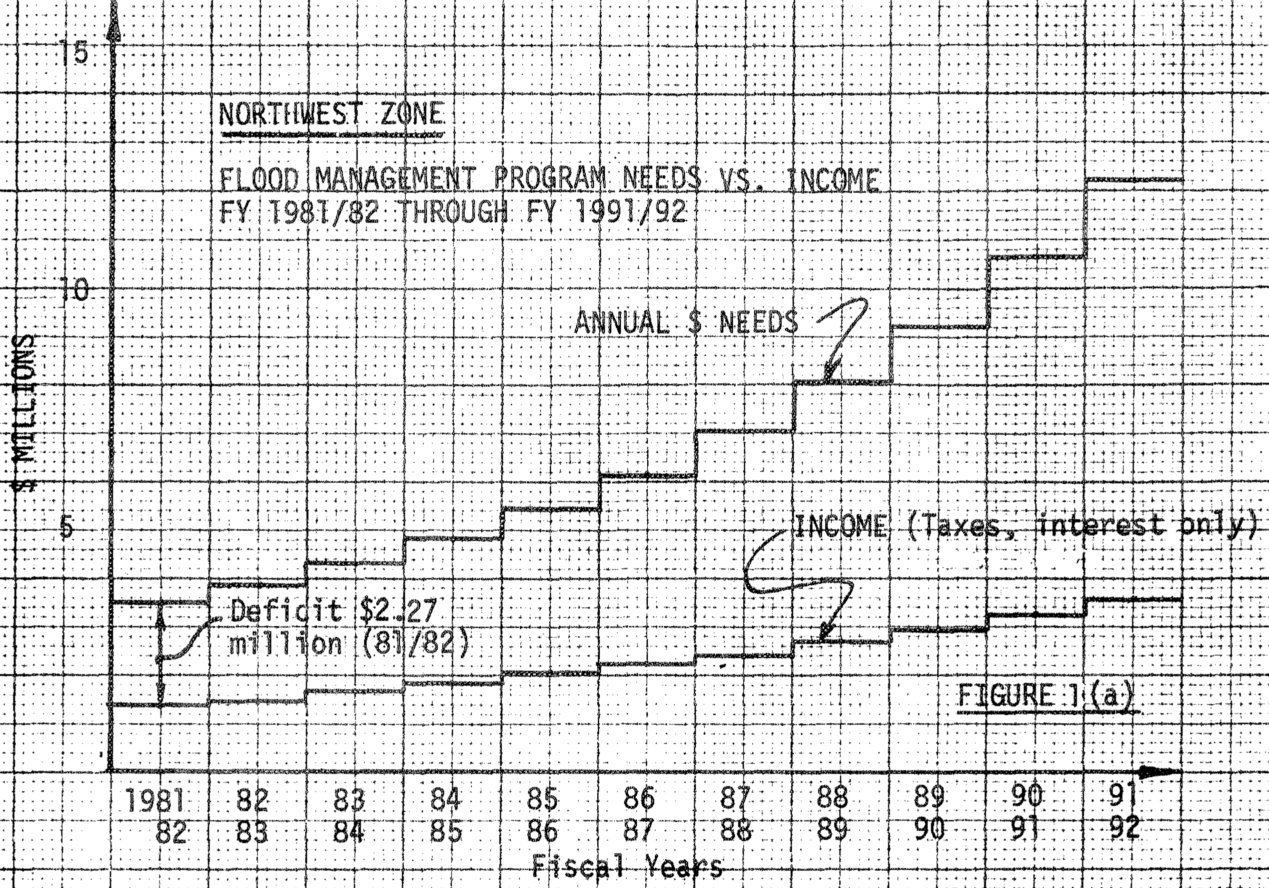
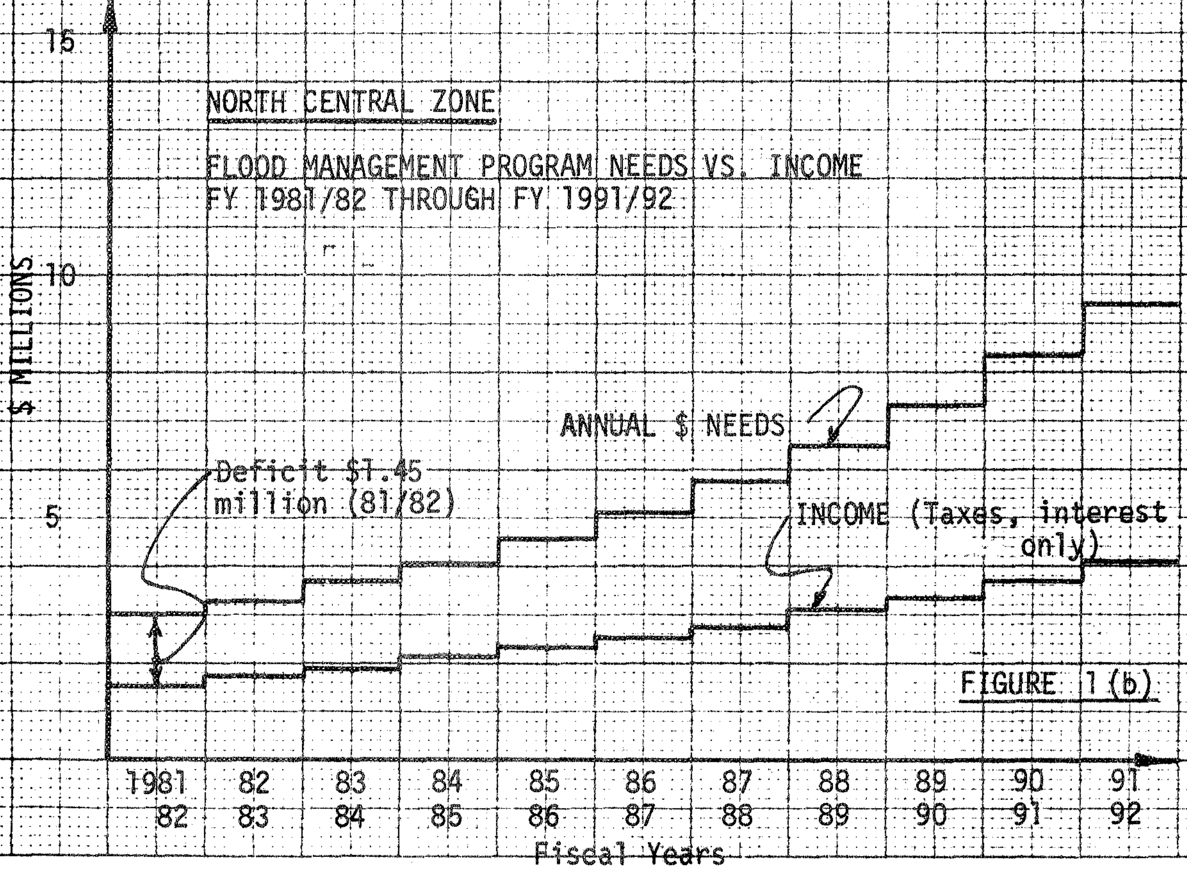

NORTHWEST ZONE

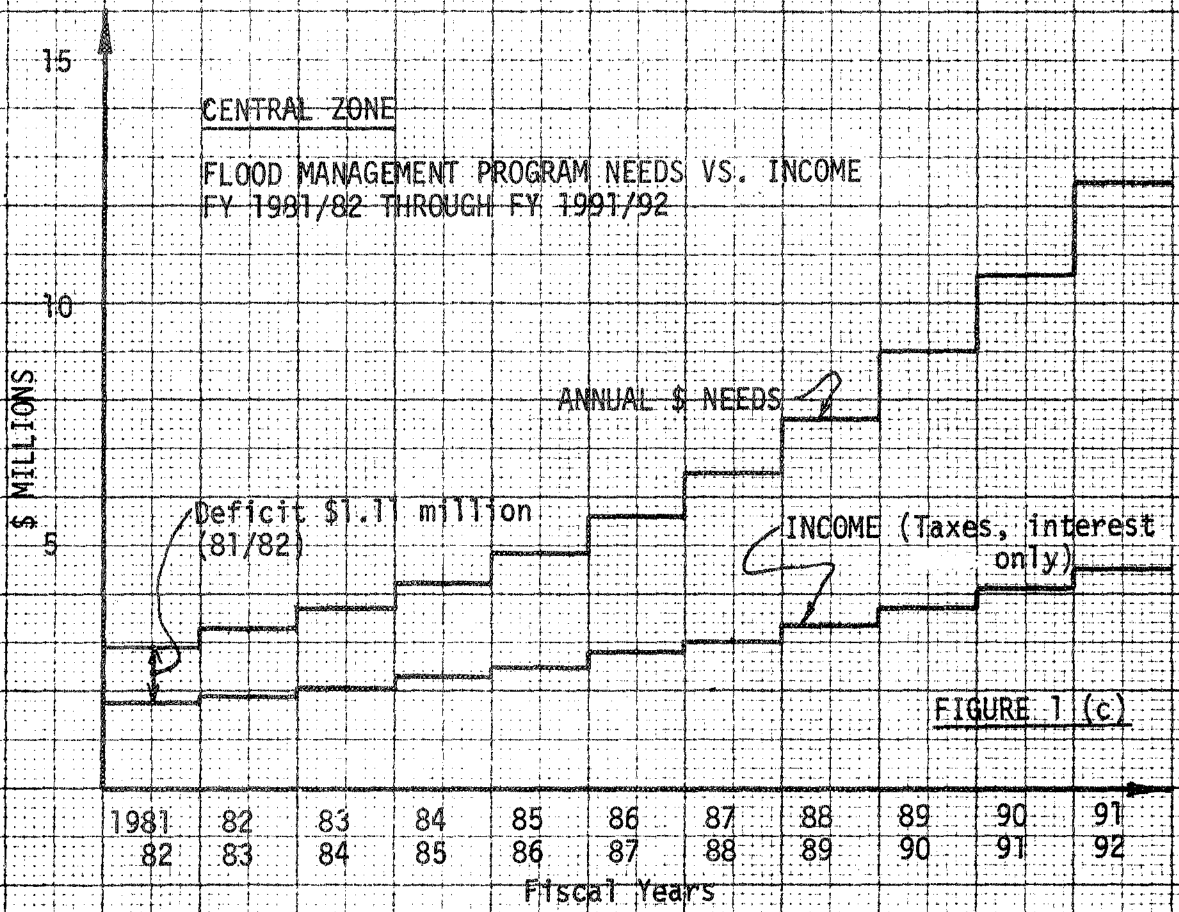
FLOOD MANAGEMENT PROGRAM NEEDS VS. INCOME
FY 1981/82 THROUGH FY 1991/92

FIGURE 1(a)


NORTH CENTRAL ZONE

FLOOD MANAGEMENT PROGRAM NEEDS VS. INCOME
FY 1981/82 THROUGH FY 1991/92

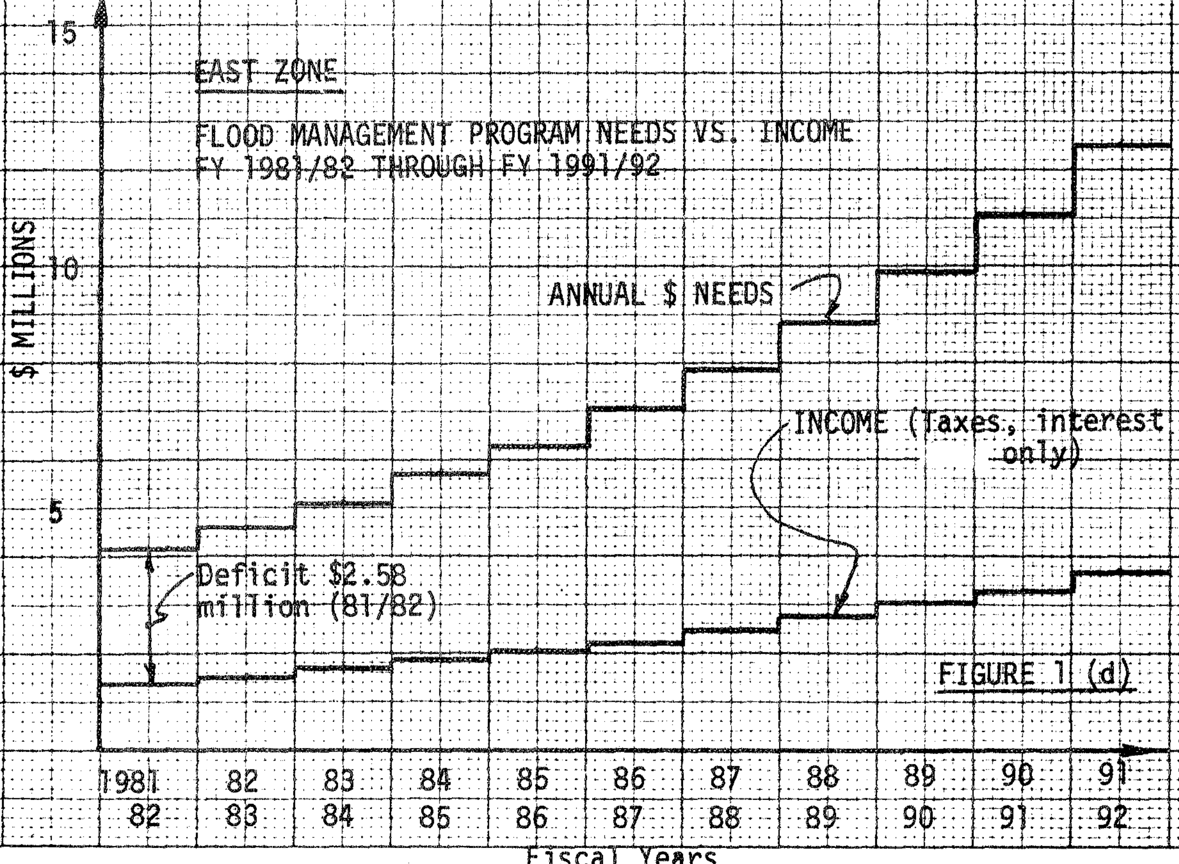
FIGURE 1(b)



CENTRAL ZONE

FLOOD MANAGEMENT PROGRAM NEEDS VS. INCOME
FY 1981/82 THROUGH FY 1991/92

FIGURE 1 (c)



EAST ZONE

FLOOD MANAGEMENT PROGRAM NEEDS VS. INCOME
FY 1981/82 THROUGH FY 1991/92

FIGURE 1 (d)

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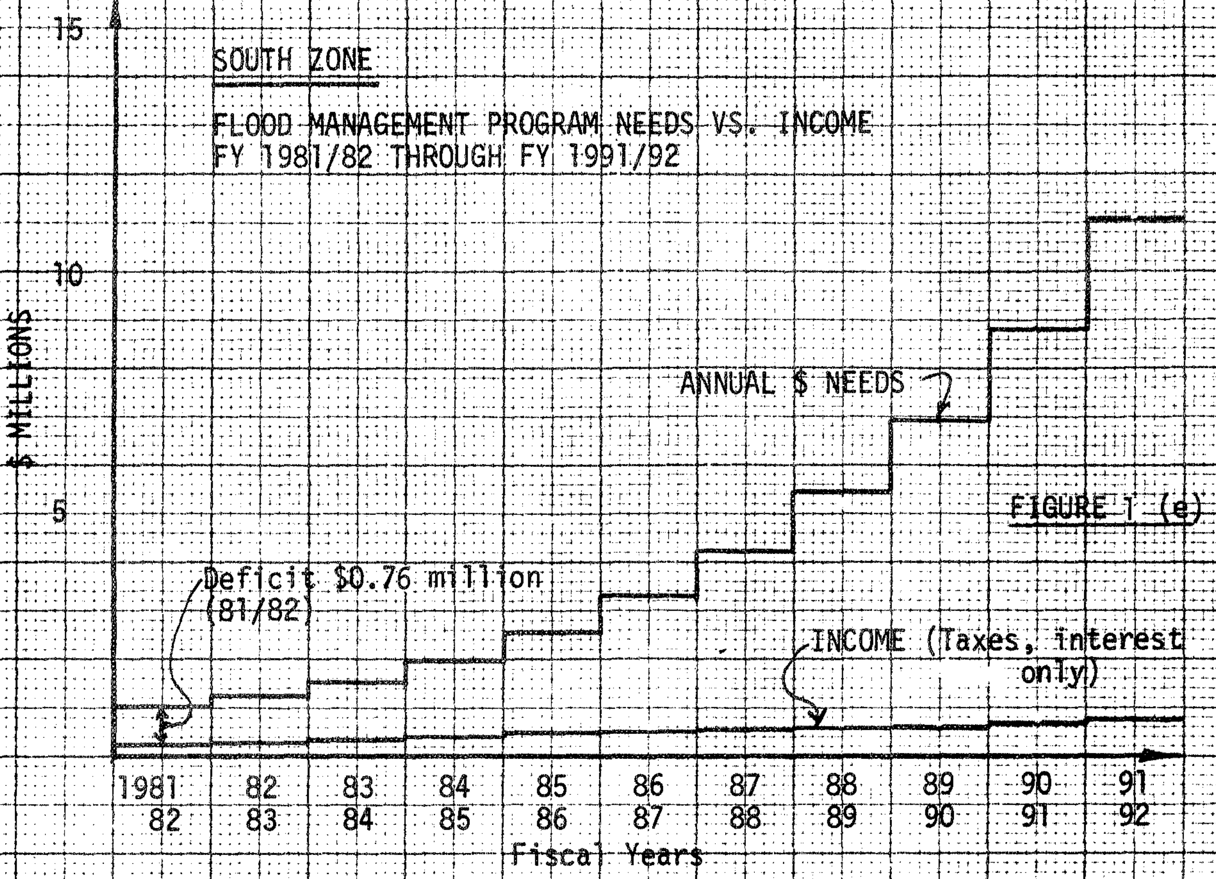
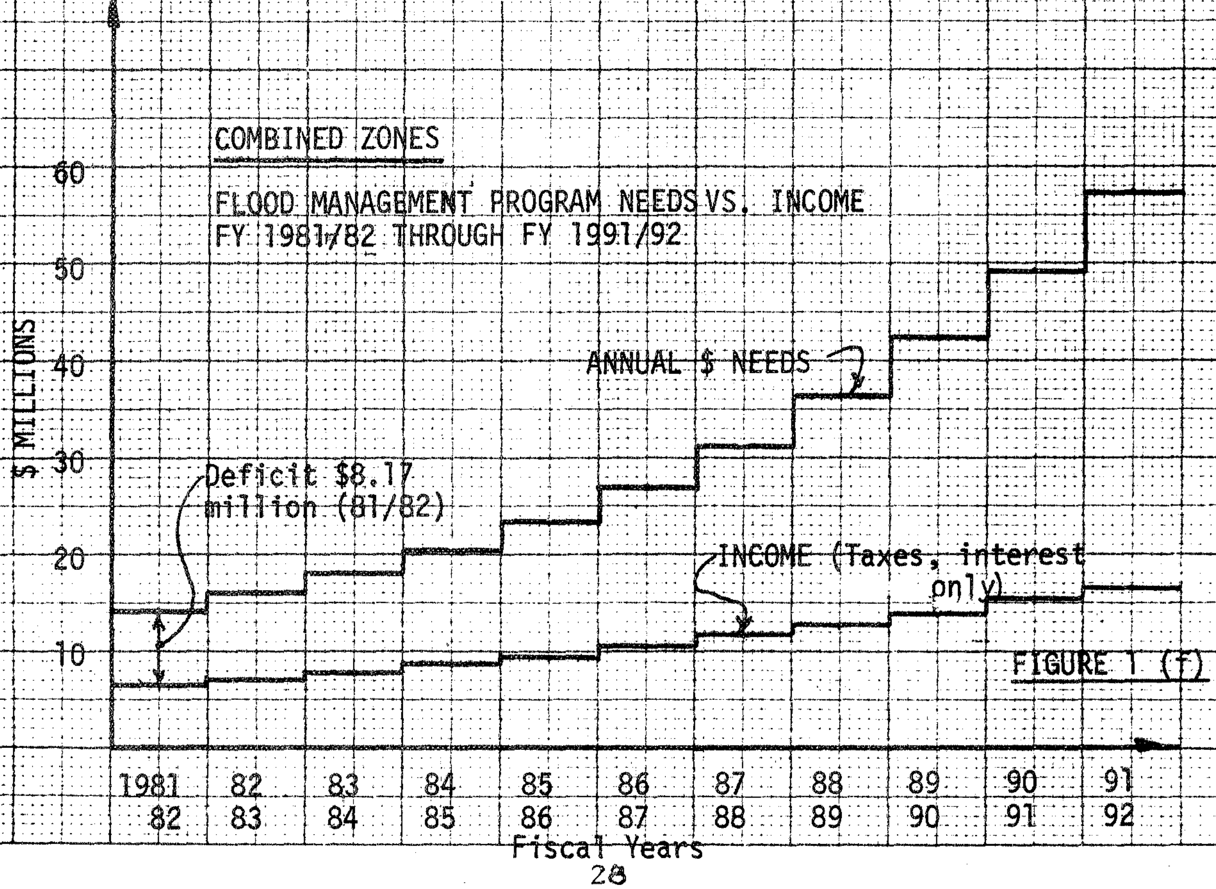


SOUTH ZONE

FLOOD MANAGEMENT PROGRAM NEEDS VS. INCOME
FY 1981/82 THROUGH FY 1991/92

FIGURE 1 (e)



COMBINED ZONES

FLOOD MANAGEMENT PROGRAM NEEDS VS. INCOME
FY 1981/82 THROUGH FY 1991/92

FIGURE 1 (f)

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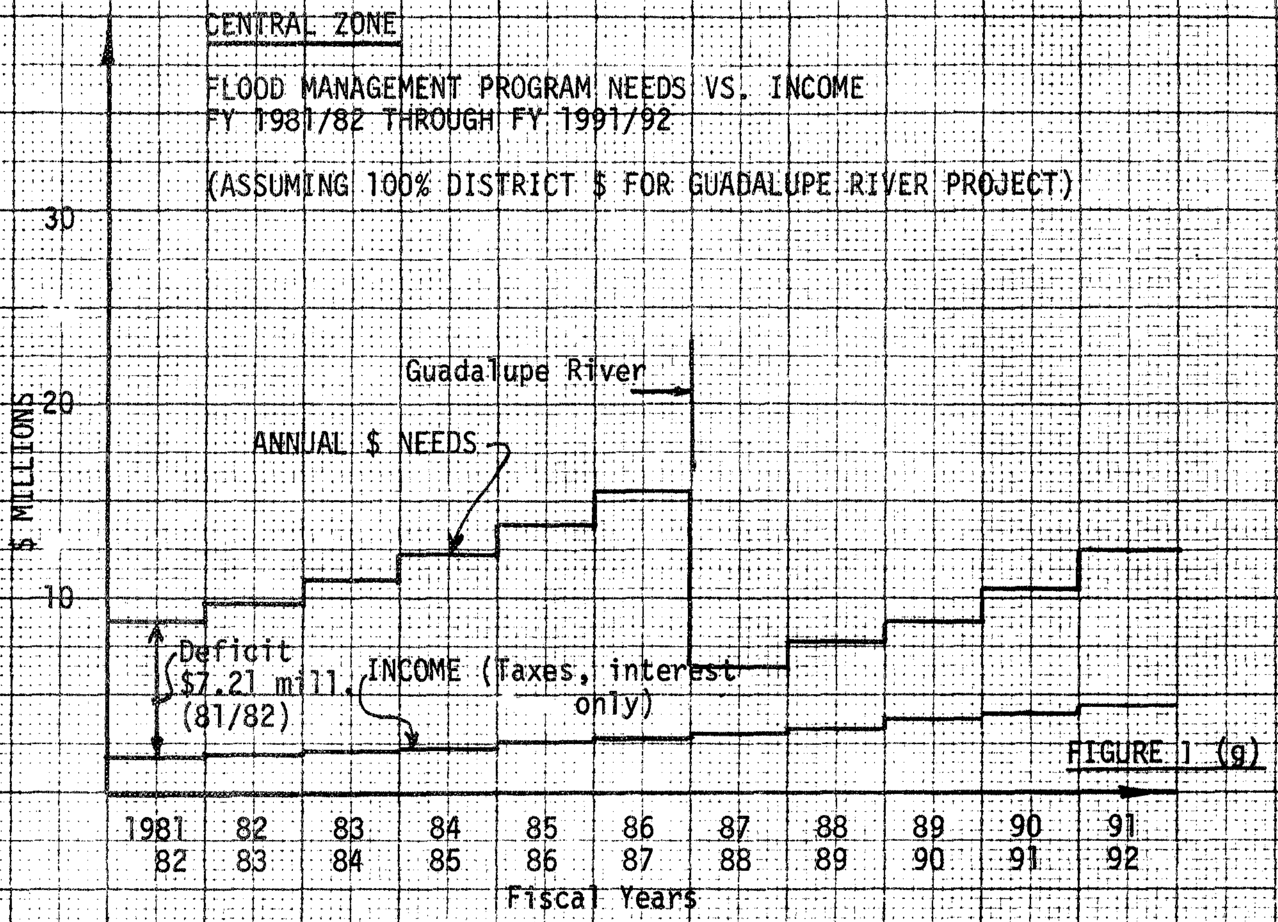


FIGURE 1 (g)

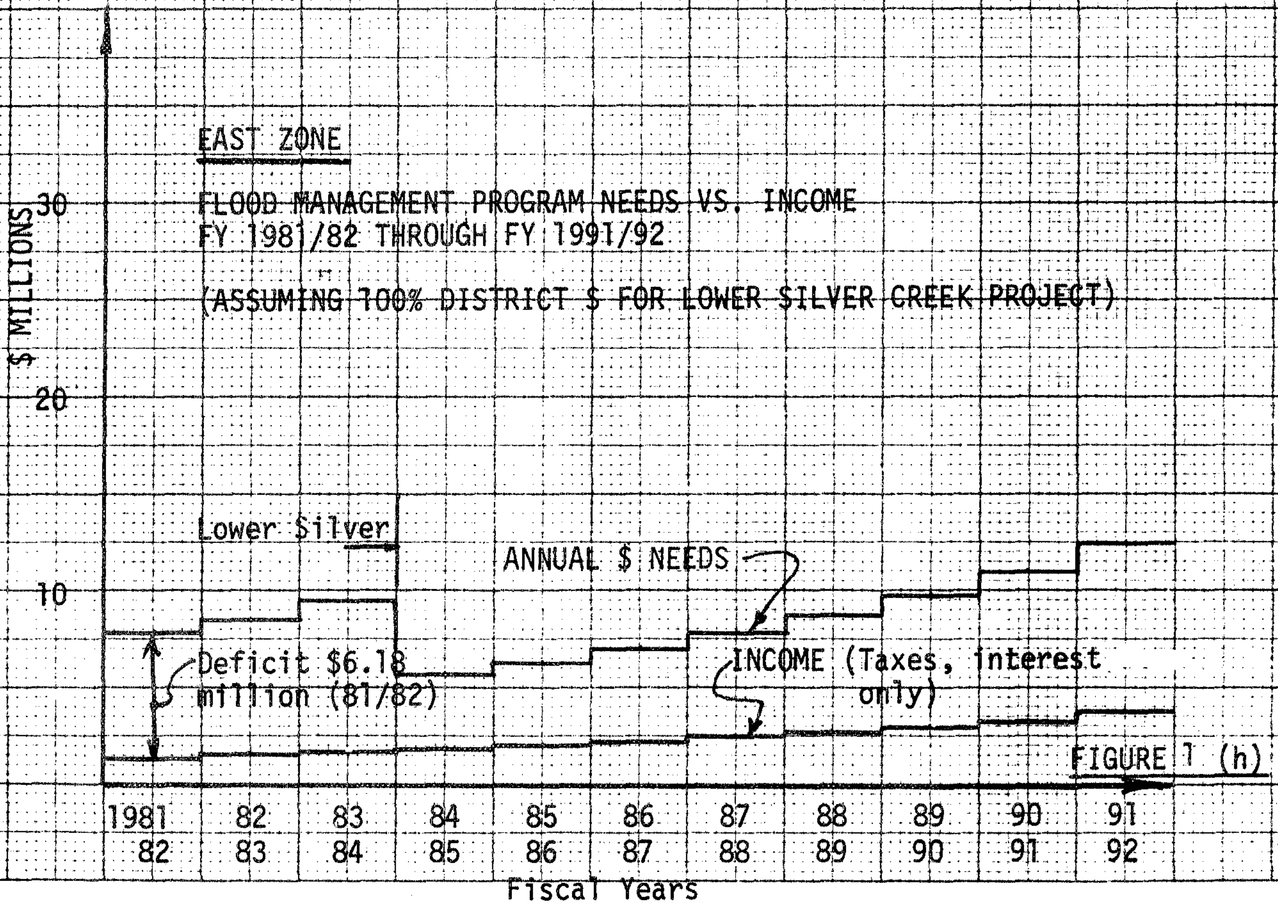


FIGURE 1 (h)

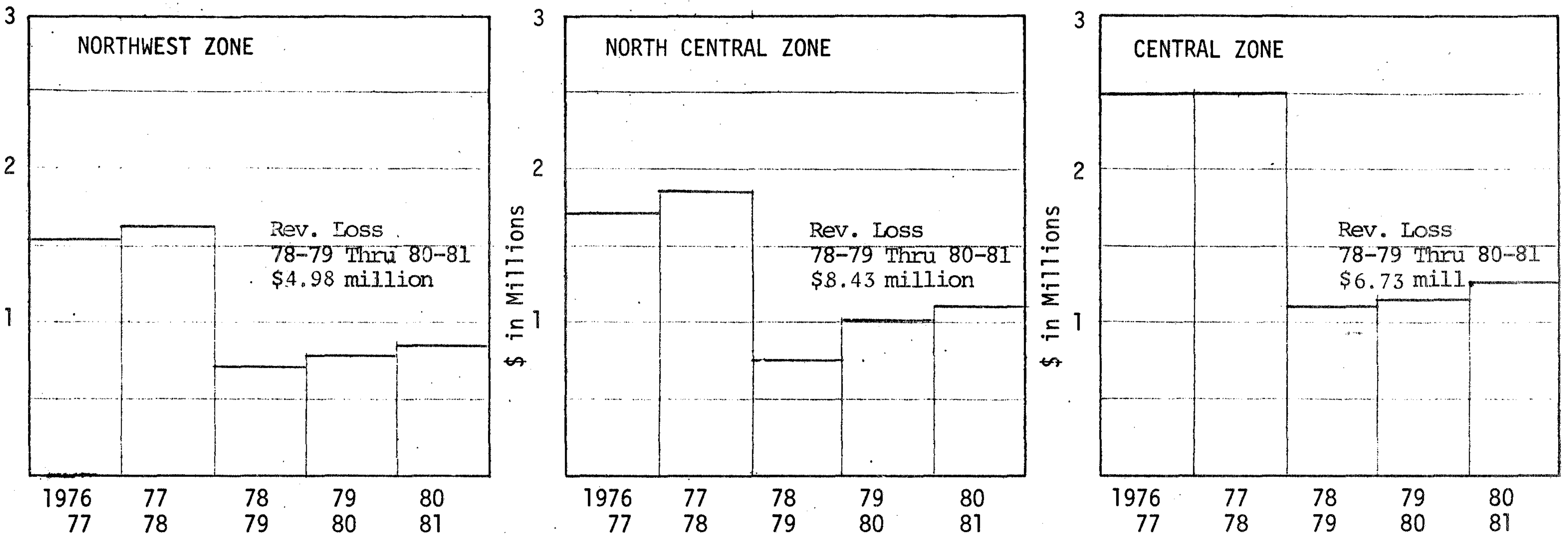
Flood control tax revenues are by far the larger source of income in each of the five flood control zones. Presently, the District's pro-rata share of tax revenues under AB 8 is allocated to each zone according to the pre-Proposition 13 income ratios between zones. This is done under current Board policy, although counsel advises that these tax revenues could legally be considered assignable to a single fund and expended without consideration of zone boundaries—if the Board desires.

At the present time, a separate tax is levied within the Northwest and North Central Zones for the purpose of covering the cost of bond repayment. This income will continue in these two zones until the bonds are redeemed in 1988 and 2003, respectively. For the purpose of considering available income, these bond repayment revenues need not be considered because, in the preceeding section on cost, the bond repayment cost was not included.

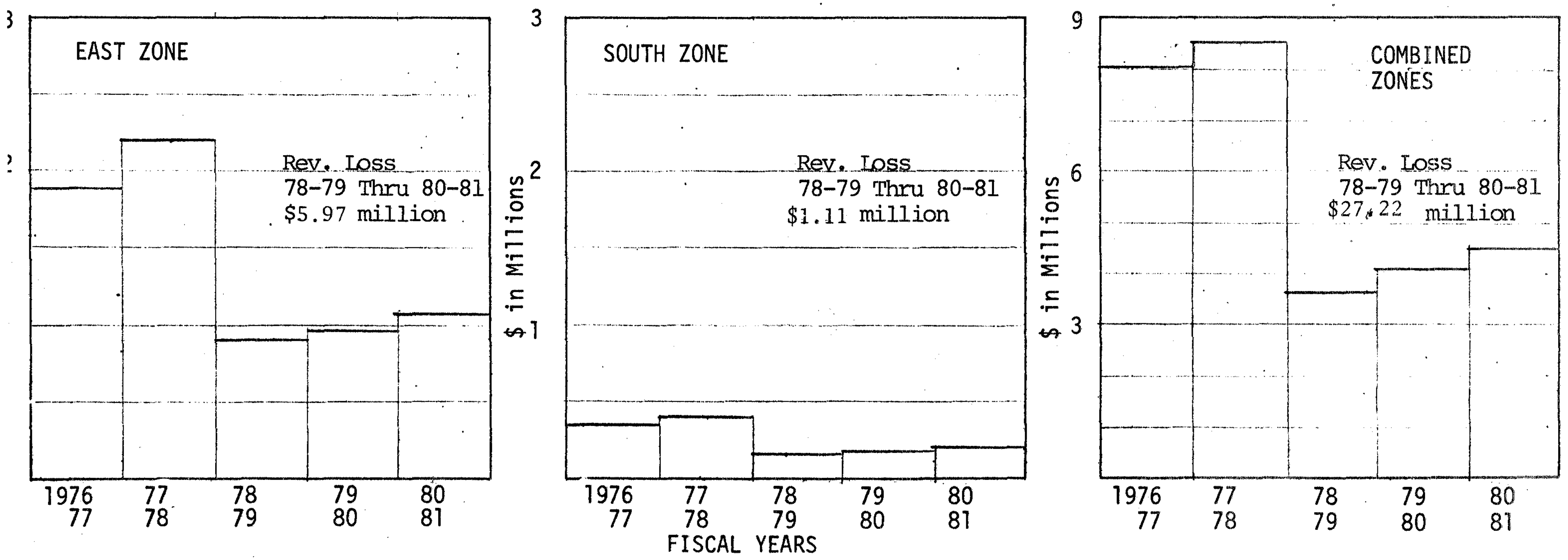
Similarly, in the Central and East Zones in which an annual fund has been appropriated to provide for much of the District's share of future federal projects (Guadalupe River and Lower Silver Creek), annual interest from these encumbered funds will not be included in estimates of future income because interest so generated must be kept with the fund to accommodate annual inflation until the project is constructed. Previous discussion of funding needs (Table 2) did show the additional need of $4 million to add to the $10 million now set aside for the District's share of the Guadalupe River Project.

The Effects of Proposition 13

Proposition 13—passed in June, 1978 - had a dramatic effect on District income. Figure 2 shows the annual tax revenue picture for the District between fiscal years 1976-77 and 1980-81. Revenue lost is shown by zone and for the combined zones. For the combined zones, the net loss to the District between FY 1977-78 and FY 80-81 has amounted to nearly $27 million. For FY 1981-82, it is estimated that $11.7 million more



FLOOD CONTROL TAX INCOME F/Y 1976-77 THROUGH 1980-81 FIG. 2



flood control tax income would have been available to the District for flood management if Proposition 13 had not passed.

Future Available Income

Judging from recent trends, the District's pro-rata share of tax revenue under Proposition 13 may increase at the rate of 10% per year. An estimate of the interest contribution to total income has been made, not considering interest from the encumbered Guadalupe River and Lower Silver Creek Project funds. As previously described, interest from those savings must be applied to the principal in order to keep pace with cost of inflation for those projects. One source of income which has been under consideration is the charging of land development fees to offset part of the cost of Ordinance Administration. Because anticipated revenue from such fees would be low ($270,000 per year) relative to overall need, it has been recommended that these fees not be adopted. A further reason would be the potentially high cost associated with collection of fees.

Projected income, below, does not include income from land development fees.

For 1981-82 the estimated income is as shown in Table 5, considering the two sources discussed above.

Table 5
Estimated
Flood Management Income
1981-82

($ millions)

Income Source	NW	NC	C	E	S	Combined Zones
	Zones					
Taxes	$ .96	$1.32	$1.55	$1.40	$.24	$5.47
Int.	.20	.20	.21	.17	0	.78
Total	$1.16	$1.52	$1.76	$1.57	$.24	$6.25

Projecting these 1981-82 estimated income figures into the future at 10% annual growth provides the desired forecast to compare with needs. Other non-determinable sources include construction of flood damage reduction measures by developers, possible future federal projects, and grants.

Needs vs. Income - The Shortfall

Figures 1 (a) through 1 (h) show the annual income projections superimposed on the need graphs discussed previously. Two things are apparent: (1) income falls short of present and future need in each zone, and (2) the difference between need and income grows larger as years advance.

Alternative Levels of Supplemental Funding

Considering all of the above, there are four amounts of supplemental funding which will be considered for benefit assessment. Alternatives A through C address supplemental funds needed to satisfy various combinations of the programs shown in Table 4 and to recover tax revenue lost to Proposition 13. Flood damage reduction possible under these alternatives assumes assessment rates which vary according to needs in each zone. Alternative D will go further and consider the supplemental funds required to fund the total desired flood management program, described in Table 4, but reduced by the nearly $1 million presently paid annually by the Northwest and North Central Zones toward bond repayment. Nearly uniform zone assessment rates are considered under this alternative in the interest of public acceptance. Alternative D will also propose that Ordinance Administration and other administrative costs be funded as Districtwide programs from a new combined fund (rather than funding these from the zones as is now done).

1. Alternative A - 1981-82 Supplemental funds needed = $8.17 million. ($14.42 million program needs less $6.25 million tax and interest income.) This is the shortfall of funds required to be made up if a flood management program is

desired which would reduce 1981 potential damages 73% by 1991. Table 4 shows the costs associated with this alternative. This would include the planned $7.2 million annual construction program ($6.4 million of which would be project construction by the District) assuming federal support of the Guadalupe River, Lower Silver Creek, Llagas Creek and Uvas Creek projects.

Alternative A - Alt. - 1981-82 Supplemental funds needed = $25.24 million. ($31.49 million program needs less $6.25 million tax and interest income). Same as above but with the increased District burden if federal participation is not achieved in the Guadalupe River, Lower Silver Creek Projects, Llagas Creek and Uvas Creek projects. This level of funding would likewise reduce 1981 potential damages 73% by 1991.

2. Alternative B - (1981-82 Supplemental funds needed = $11.7 million) Recovery of income level lost to Proposition 13. This would provide for a flood management program which would reduce 1981 potential damages 85% by 1991, by providing for a $8.30 million annual project construction program by the District.

3. Alternative C - (1981-82 Supplemental funds needed = $5 million) This would be the supplemental funds needed to adequately fund only the Administration, Planning and Routine Maintenance programs. This would reduce 1981 potential damages 48% by 1991 by providing for a $3.20 million annual project construction program by the District (much of the $3.2 million is now being used for maintenance). In 1981-82, only the South Zone would not have enough income to even support its Administration, Planning and Maintenance needs ($930,000 cost versus $240,000 income). However, in time, due to increasing maintenance needs resulting from project completion, other zones will reach a point at which projected income would not be adequate for these programs. The years in which Administration, Planning and Maintenance costs

would exceed income in each zone are: Northwest Zone, 1987-88; North Central Zone, 1989-90; Central Zone, 1991-92; East Zone, 1984-85; and South Zone, 1981-82.

4. Alternative D - 1981-82 Supplemental funds needed = $7.21 million. ($14.42 million program needs, less $.96 million bond need, less $6.25 million tax and interest income). This would be the supplemental funds needed to fund much of the flood management program as in Alternative A, but differing from Alternative A in the following ways:
    1. Total 1981-82 needs would be reduced to reflect the $960,000 now paid by the Northwest and North Central Zones toward bond repayment. This leaves $7.21 million required in supplemental funds.
    2. Nearly uniform assessment rates would be adopted in each zone except that the Northwest and North Central Zone rates would be adjusted downward to reflect the present bond surcharge in these zones. Uniform rates would be proposed as a public acceptance measure.
    3. Ordinance Administration and other administrative costs would be funded Districtwide from a new combined fund separate from the zones.

Actual funding needs total $14.42 million as previously described in Table 4. Under Alternative D, however, those needs would be distributed differently, as shown in the following Table 6, and the benefit assessment would generate only enough revenue to fund $13.46 million of the total program. The distribution of needs differs from that of Table 4 in that Ordinance Administration and other Administrative projects are shown funded under a proposed new combined-zone fund, not separately by zone.

Table 6
Reallocated Flood Management Program Needs
Beginning in 1981-82
(Alternatives D and D. Alt.)

	With Federal Projects 1/							Without Federal Projects 2/						
Zones	NW	NC	C	E	S	Combined Zones Fund	Total	NW	NC	C	E	S	Combined Zones Fund	Total
Programs	($ millions)							($ millions)						
Administration														
Ord. Admin. & Admin. Projects	-	-	-	-	-	.80	.80	-	-	-	-	-	.80	.80
Insurance	.04	.04	.04	.04	.04	-	.20	.04	.04	.04	.04	.04	-	.20
Planning	.10	.15	.10	.20	.10	-	.65	.10	.15	.10	.20	.10	-	.65
Maintenance														
Routine Maintenance	.55	.55	.80	.80	.65	-	3.35	.55	.55	.80	.80	.65	-	3.35
Rehab. Meas.	.97	.75	1.05	.65	0	-	3.42	.97	.75	1.05	.65	0	-	3.42
Construction														
District Projects	1.23	1.25	.15	2.15	0	-	4.78 5/	1.23	1.25	.15	2.15	0	-	4.78 5/
Llagas Creek Fund	-	-	-	-	-	-	-	-	-	-	-	6.67	-	6.67
Uvas Creek Fund	-	-	-	-	-	-	-	-	-	-	-	.70	-	.70
Lower Silver Fund	-	-	-	-	-	-	-	-	—	3.60	-	-	3.60	
Guadalupe River Fund 3/	-	-	.50	-	-	-	.50	-	-	6.60	-	-	-	6.60
Misc. 4/	.40	.07	.07	.11	.07	-	.72	.40	.07	.07	.11	.07	-	.72
Totals	$3.29	$2.81	$2.71	$3.95	$.86	$.80	$14.42	$3.29	$2.81	$8.81	$7.55	$8.23	$.80	$31.49

1/ Federal participation anticipated in Guadalupe River and Lower Silver Creek projects (District share = 20% of project total), Llagas Creek and Uvas Creek (District share = 0).

2/ Funds needed assuming no federal participation in projects listed in Note 1, (District Share = 100%).

3/ Guadalupe River fund would require $.5 million/yr. to fund balance of District share ($14 million needed less $10 million now saved); $6.6 million/yr. would be needed for District to fund 100% of project by 1988.

4/ Miscellaneous needs include: Diericx Drive purchases in NW zone (through 1985); Ord. Construction; purchase of reserved right of way and bridge cost sharing agreements.

5/ The total project construction need amounts to $6.40 million annually (1981-82). This is the sum of District projects, ($4.78 million) and $1.62 million of Rehabilitation Measures.

Income under Alternative D would be as indicated in the following Table 7.

Table 7

Estimated Flood Management Income
Under Funding Alternative D
($ millions, 1981-82)

	NW	NC	C	E	S	New[1] Combined Fund	Total
Flood Control Tax Allocation	$ .81	$1.10	$1.37	$1.18	$ .21	$ .80	$5.47
Interest	.20	.20	.21	.17	0	-	.78
Proposed Benefit Assessment[2]	1.25	1.01	2.52	2.08	.35	-	7.21
Bond Repayment Tax Proceeds [3]	.20	.76	-	-	-	-	.96
Total Flood Management Income	$2.46	$3.07	$4.10	$3.43	$ .56	$ .80	$14.42

[1] New combined fund would be established to cover the cost of Ordinance Administration and other administrative costs through the resources of the combined zones.

[2] The proposed benefit assessment income shown is that generated by average single family parcel assessments of about $10 (NW Zone); $6.75 (NC); $12 (C); $12 (E), and $12 (S). Refer to the following chapter on assessments.

[3] Bond repayment income was not included in previous tables but is shown here as it relates to adjustments in NW and NC Zone assessments under Alternative D.

The income shown in Table 7 would permit the following:

1. An increased maintenance program as recommended
2. A District construction program which, together with presently identified federal projects, would reduce the present potential 1% flood damages 60% by 1992.

Alternative D - Alt. - (1981-82 supplemental funds needed = $24.28 million. $31.49 million program needs, less $.96 million bond need, less $6.25 million tax and interest income). Same as Alternative D above, but with increased District burden if federal participation is not achieved in the Guadalupe River, Lower Silver Creek, Llagas Creek and Uvas Creek projects. This level of funding would likewise reduce 1981 potential 1% damages 60% by 1992.

Obtaining these supplemental funds is the subject of the following discussion of AB 549 benefit assessments. Individual and combined zone deficits are discussed and assessment rates are estimated using the Alameda County assessment criteria.

COMPUTATION OF PARCEL ASSESSMENTS

Computation Method

AB 549 permits levying a benefit assessment with benefits determined on any reasonable basis. The law states that "benefits received may be determined on the basis of the proportionate storm water runoff from each parcel". This method has been applied by the Los Angeles County Flood Control District and by the Alameda County Flood Control and Water Conservation District. For our purposes this same method is recommended.

The method spreads the total assessment to parcels within the assessment area in proportion to each parcel's runoff. Runoff is determined by first knowing a parcel's size in acres, its present land use (residential, commercial, industrial, agricultural, etc.) and then assigning a runoff factor to its general land use category. Runoff factors (always less than 1.0) are estimates of how much rainfall runs off a parcel in comparison to the amount of rainfall that falls on a parcel. In other words, the runoff factor is a way of expressing the relative degree of imperviousness of parcels with different land uses. Paved and improved parcels have runoff factors closer to 1.0 than do unpaved or unimproved parcels. Reducing the large number of land uses in the County to five general categories for estimating runoff under the benefit assessment procedure provides for a manageable and reasonable computation method.

Knowing the actual land use, runoff factor and area of each parcel to be assessed permits proportioning of the total dollar amount desired under the assessment (the funding deficit) to each parcel.

County Assessor records have provided a relatively current and complete file of data needed for each of the 363,000 parcels within Santa Clara County. With the cooperation of the County and with efficiencies provided by the District's Data Processing Division staff, an estimate has been made of unit assessments, and an analysis has been made of the effort which would be required to "fill in the blanks" in data. Information relative to public utility parcels is yet to be obtained.

Table 8 shows the tabulation of numbers of parcels in Santa Clara County and their breakdown into six categories of land use and respective runoff factors (as used by Alameda County).

Following Los Angeles and Alameda, all parcels are analyzed in terms of the number of basic assessment units (BAU's) each contains. In the case of Alameda, the basic assessment unit was chosen to be the single family residential parcel, 0.25 acre in size multiplied by its assigned runoff factor of 0.40. All other parcels of different land uses can then be inventoried for the number of units contained in each. The parcels' areas are multiplied by their appropriate runoff factors and that product is divided by 0.1, the basic assessment unit, giving total units per parcel.

$$\begin{array}{ll} \text{No. of Units} & \text{Area of Parcel (acres) x Parcel Runoff Factor} \\ \text{In Each Parcel} & \hline \qquad\qquad\qquad \text{One Unit} \end{array}$$

Per Alameda Co., One Unit = .25 acre x .4 (runoff factor) = .1

The total benefit assessment is spread by finding the total number of units in all parcels and multiplying that by a rate of assessment (dollars per unit). Single family residential parcels containing 0.25 acre or less may be assigned one unit only and be assessed accordingly, as was done by Alameda.

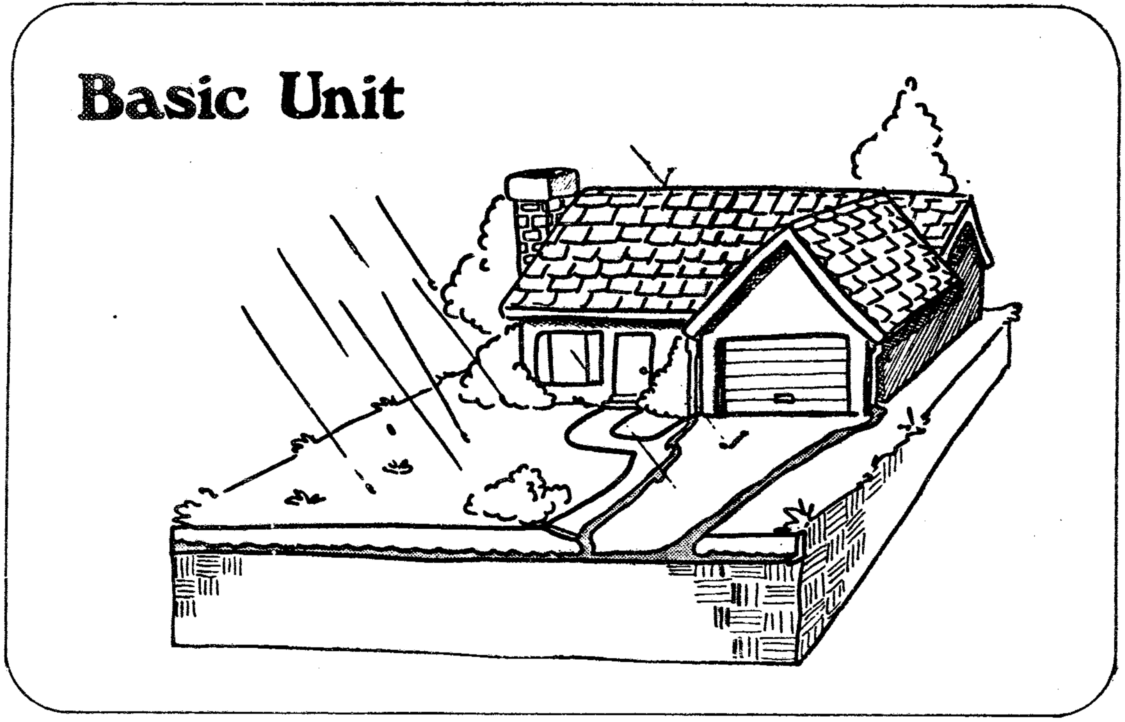


Table 8

Santa Clara County Preliminary Inventory of Parcels According to Six Land Use Categories (As of March,1980)

	Runoff			Flood Control Zones			Outside	
Land Use Category	Factor	NW	NC	C	E	S	Zones	Totals
A. Commercial/ Industrial	0.8	2,800	2,900	6,250	1,800	650	-0-	14,400
B. Institutions/ Apartments	0.6	6,700	8,800	9,400	7,450	400	-0-	32,750
C. Single family residential & small multiple (2-4 units)	0.4	41,200	72,200	96,550	64,100	9,900	1,500	286,950
D. Disturbed rural, salt ponds	0.005	2,000	2,000	4,550	7,200	4,200	600	20,550
E. Undisturbed agric., wetlands	0.003	250	200	800	1,000	2,100	2,500	6,850
X. Exempt (public lands)		150	150	200	200	200	500	1,400
Total Number of Parcels		53,100	86,750	118,750	81,750	17,450	5,100	362,900

Note: The above preliminary inventory does not include parcels owned by public utilities (P.G. & E., P.T. & T., S.P.T.C., W.P.R.R., etc.)

Number of Assessment Units in Santa Clara County

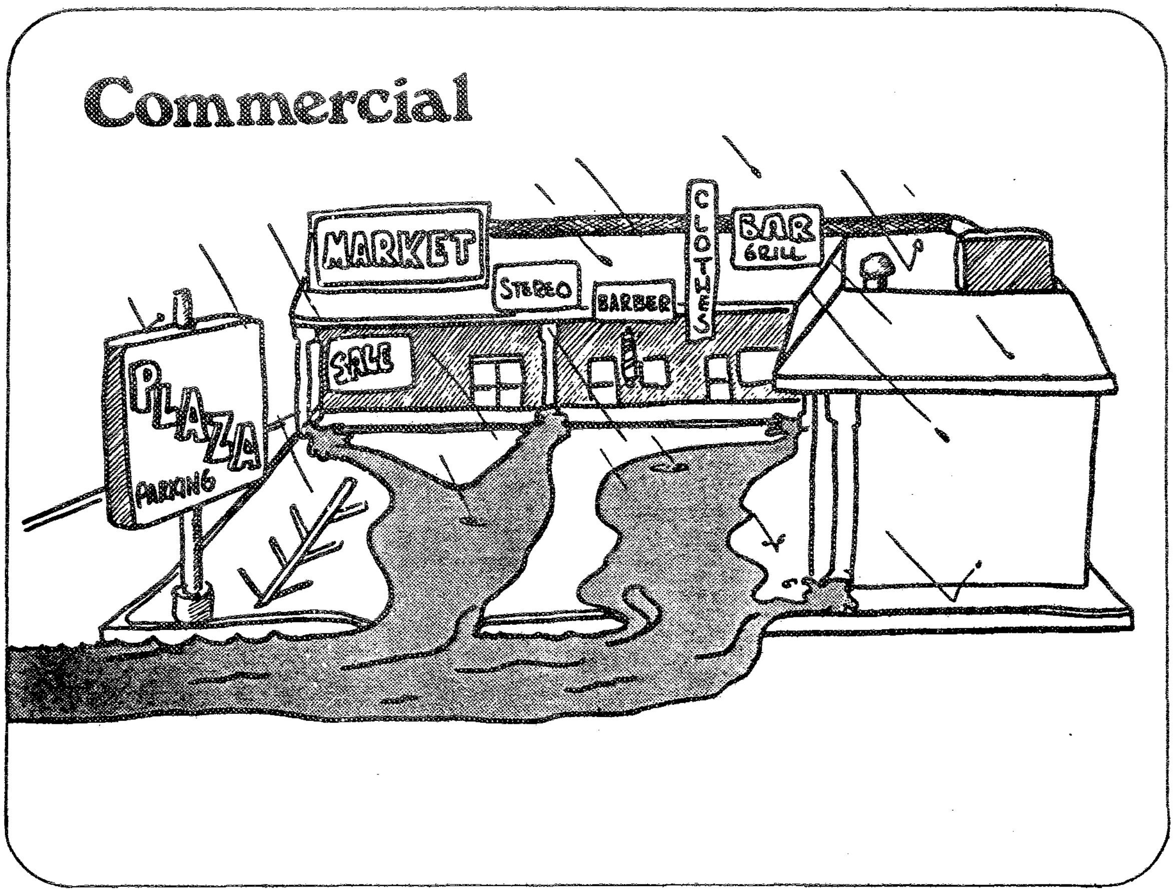
A relatively accurate measure of the number of assessment units available within the County, the combined five flood control zones and within each individual flood control zone has been made using existing Assessor data for Santa Clara County. These estimated units are shown in Table 9. Again, for this preliminary report, the units derived by the formula described above utilized Alameda County's land use categories and runoff factors.

Viewed another way, the units shown in Table 9 actually represent the amount of assessment revenue which may be raised for every dollar of assessment levy imposed upon single family residences, 0.25 acre or less in area.

Table 9
Total Available Assessment Units

Within Flood Control Zones	Assessment Units*
Northwest Zone	123,500
North Central Zone	150,000
Central Zone	214,100
East Zone	176,100
South Zone	30,100
Within Combined Zones	693,800

* Units shown equal assessment revenues which could be generated through a $1 assessment to single family residential parcels. For purposes of this report, assessment units have been estimated using Alameda County Flood Control and Water Conservation District criteria (public utility parcels are not included in this preliminary estimate of assessment units).



Estimates of Possible Parcel Assessment Rates for Flood Management in Santa Clara County

Because Table 9 gives benefit assessment revenues which can be generated through the levying of $1 assessment to the basic single family, 1/4 acre parcel, it also permits the estimate of parcel assessment rates of any given desired total assessment. For the three levels of funding deficit described in the previous chapter, the following describes the required assessment rates:

Alternative A - Supplemental income needed to support a desired flood management program as shown previously in Table 4.

Table 10 shows a preliminary schedule of assessment rates which would be required to support a flood management program adequate with respect to operations and maintenance needs and sufficient to complete major needed projects ($6.4 million District construction per year). Table 10 indicates assessment rates for two possible conditions:

Table 10

Assessment Rates to Support a Desired Flood Management Program (Alternatives A and A-Alt.)

	With Federal Projects 3/						Without Federal Projects					
Zone	NW	NC	C	E	S	Combined Zones	NW	NC	C	E	S	Combined Zones
Amount of Zone Assessment ($ millions)	$2.27	$1.45	$1.11	$2.58	$.76	$8.17	$2.27	$1.45	$7.21	$6.18	$8.13	$25.24
Land Use Category (see Table 8)	Assessment Rates ($/Acre) 3/											
A	$147	$77	$41	$117	$202	$94	$147	$77	$269	$281	$2,161	$291
B	110	58	31	88	152	71	110	58	202	211	1,621	218
C 1/	18	10	5	15	25	12	18	10	34	35	270	36
D	.92	.48	.26	.73	1.26	.59	.92	.48	1.68	1.75	13.50	1.82
E	.55	.29	.16	.44	.76	.35	.55	.29	1.01	1.05	8.10	1.09

1/ "C" category (single family residential and small multiple, 2-4 units) rates shown are not per acre. Rates shown are for .25 acre parcels or smaller. Larger C category parcels would be assessed D rates for portions greater than .25 acre.

2/ Land uses A, B, D, and E would have minimum assessments equal to 1/4 of the assessments shown. These minimum assessments would apply to .25-acre sites or smaller.

3/ Federal Projects are Guadalupe River, Lower Silver Creek, Llagas Creek and Uvas Creek.

4/ Figures in this and other assessment rate tables are preliminary estimates.

(1) assuming federal support for the Guadalupe River, Lower Silver Creek, Llagas Creek and Uvas Creek projects and, (2) assuming no federal support for those major projects.

Alternative B - Supplemental income needed to support the flood management program up to the limit of tax revenues estimated to be lost under Proposition 13.

Table 11 shows a preliminary schedule of assessment rates to recover the level of income which would have existed without Proposition 13.

Table 11

Assessment Rates to Recover
Pre-Prop. 13 Tax Revenue Level
(Alternative B)

Zone	NW	NC	C	E	S	Combined Zones
Amount of Zone Assessment	$2.11	$3.71	$2.90	$2.47 ($Millions)	$0.51	$11.70
Land Use Category (see Table 8)			Assessment Rates ($/Acre)[2]			
A	$137	$198	$108	$112	$136	$135
B	103	148	81	84	102	101
C[1]	17	25	14	14	17	17
D	.85	1.24	.68	.70	.85	.84
E	.51	.74	.41	.42	.51	.51

[1] "C" category (single family residential and small multiple, 2-4 units) rates shown are not per acre. Rates shown are for .25 acre parcels or smaller. Larger C category parcels would be assessed at D or E rates for portion greater than .25 acre.

[2] Land uses A, B, D, and E would have minimum assessments equal to 1/4 of the assessments shown. These minimum assessments would apply to .25 acre sites or smaller.

Alternative C - Supplemental funds required to fund only an adequate level of Operations, Routine Maintenance and Administration.

Table 12 shows a preliminary schedule of assessment rates to support the District's Operations, Routine Maintenance and Administration Programs.

Table 12

Assessments Rates to Support Operations,
Routine Maintenance and Administration
(Alternative C)

Zone	NW	NC	C	E	S	Combined Zones
Amount of Zone Assessment	$.83	$.90	$1.10	$1.25 ($millions)	$.93	$5.00
Land Use Category (see Table 8)			Assessment Rates ($/Acre) 2/			
A	$54	$48	$41	$57	$247	$58
B	40	36	31	43	185	43
C1/	7	6	5	7	31	7
D	.34	.30	.26	.35	1.54	.36
E	.20	.18	.15	.21	.93	.22

1/ "C" category (single family residential and small multiple, 2-4 units) rates shown are not per acre. Rates shown are for .25 acre parcels or smaller. Larger C category parcels would be assessed at D rates for portion greater than .25 acre.

2/ Land uses A, B, D, and E would have minimum assessments equal to 1/4 of the assessments shown. These minimum assessments would apply to .25-acre sites or smaller.

Alternative D - Supplemental funds required to support an active flood management program as in Alternative A, but with nearly uniform assessment rates, except in the Northwest and North Central Zones. The rates in those two zones would be reduced to reflect the bond repayment surcharge presently in effect in those zones, and the total assessment amount would be reduced from that of Alternative A ($8.17 million to $7.21

million) to reflect annual bond payment needs. Also, Ordinance Administration and other administration costs would be funded from a new combined zone fund.

Table 13 shows a preliminary schedule of assessment rates to accommodate Alternative D.

The needed assessments in each zone, for Alternatives D and D-Alt., are not derived by comparing zone needs (Table 6) with zone income, as in Alternatives A, B, and C. These, instead, are derived by computing the uniform assessment rate to obtain the total income needed under Alternatives A and A. Alt. and reducing that computed rate in the Northwest and North Central Zones to reflect their present bond surcharges. The assessment rates are then applied to the total assessment units in each zone to determine the assessment revenue which can be generated in each zone.

Uniform vs. Non-Uniform Zone Rates

In addition to the need to decide how much total money should be sought (the three deficit projections discussed previously), the following decisions must be made with respect to the way in which a benefit assessment is levied:

- o Should the assessment be levied through rates which are nearly uniform throughout the combined flood control zones (that is, the rates in Table 13)?
- o Or, should the assessment be levied using different rates in each flood control zone to reflect the particular needs of that zone? (As in Tables 10, 11 and 12).

The rates as set forth in Table 13 would provide a more uniform distribution of parcel-by-parcel contribution to flood management Districtwide. While those rates would not generate ideal income to accommodate needs as shown in Table 4, their uniformity (considering bond repayment needs in the Northwest and North Central Zones) may be most desireable.

Counsel advises, on the other hand, that it may be more legally defensible to generate assessment revenues by zones in accordance with zone needs and to expend those revenues within the zone of origin. (However, it is not necessary to maintain the zone-of-origin concept with respect to the District's tax allocations under AB 8.) Again, current Board policy continues to distribute the District's tax allocation on a zone basis.

Recommended Alternative

In light of the desirability of nearly uniform assessment rates and rates which acknowledge the bonded indebtedness of the Northwest and North Central Zones, it is recommended that AB 549 benefit assessments be considered using nearly uniform rates in each flood control zone according to Alternative D, described above. Flood damage reduction, which can be achieved over the next 10 years under this recommendation, is as follows: 39% Northwest Zone; 44% North Central Zone; 99% Central Zone; 45% East Zone, and 96% South Zone. Districtwide, a 60% reduction would be possible.

Table 13

Assessment Rates to Support a Flood Management Program (Alternatives D and D-Alt.)

	With Federal Projects [3]						Without Federal Projects					
Zones	NW	NC	C	E	S	All Zones	NW	NC	C	E	S	All Zones
Amount of Zone Assessment ($ millions)	$1.25	$1.01	$2.52	$2.08	$.35	$7.21	$4.29[4]	$4.70[4]	$7.78	$6.41	$1.10	$24.28
Land Use Category (See Table 6)	Assessment Rates ($/Acre/Year) [2]											
A	$82	$54	$95	$95	$95	-	278	248	291	291	291	-
B	61	41	71	71	71	-	209	186	218	218	218	-
C[1]	10	7	12	12	12	-	35	31	37	37	37	-
D	.51	.34	.59	.59	.59	-	1.74	1.55	1.82	1.82	1.82	-
E	.30	.20	.35	.35	.35	-	1.04	.93	1.09	1.09	1.09	-

[1] "C" category (single family residential and small multiple, 2-4 units) rates shown are not per acre. Rates shown are for .25 acre parcels or smaller. Larger C category parcels would be assessed D rates for portions greater than .25 acre.

[2] Land uses A, B, D, and E would have minimum assessments equal to 1/4 of the assessments shown. These minimum assessments would apply to .25-acre sites or smaller.

[3] Federal Projects are Guadalupe River, Lower Silver Creek, Llagas Creek and Uvas Creek.

[4] Unlike Table 10, NW and NC Zone assessments would increase under Alternative D-Alt. even though these zones have no federal projects. Alternatives D and D-Alt. spread total program needs to all zones by nearly uniform rates.

[5] Figures in this and other assessment rate tables are preliminary estimates.

THE ELECTION REQUIREMENT

To implement benefit assessment under AB 549, the question whether the District shall be authorized to levy benefit assessments, must be put before the voters. The vote must take place either before the Board levies the first year's assessment or within one year thereafter. Assessments collected within the one year before the election are not returned in the event of failure of the ballot measure.

The election may be Districtwide with its passage or failure determined by a Districtwide tally of the votes. The election may be by individual flood control zones with passage or failure determined by tallying the votes in each zone. Conceivably, under zone elections, some zones could pass and some zones could fail the measure.

District vs. Zone Elections

A Districtwide election to implement AB 549 benefit assessment may ensure passage of the assessment measure over the entire District, rather than if the elections were conducted by zone.

Also, in terms of ballot printing and other items related to the administration of election proceedings on a Districtwide (i.e. combined zones) basis, the cost may be less for this method.

Conducting the election by zones - - - and thereby risking passage in some zones and not others - - - would carry the risk that flood management may proceed in some zones and not others. Counsel advises, however, that zone elections may be more legally defensible procedure than Districtwide because of the "home rule" implications.

Election Scheduling

The next regularly scheduled general election is the June, 1982 primary. A special election could be called at any other date. The cost to the District to put an item on a regularly scheduled ballot is approximately one-eighth the cost of conducting a special election. This is discussed later in this report and, as is evident, the election costs are significant.

Besides cost, an inducement to utilize the June, 1982 election to confirm the District's levying an assessment is that the Board would be permitted, under the law, to levy the first year's assessment within the 12-months prior to June, 1982. This would permit assessments levied under AB 549 to coincide with District budget shortfalls anticipated in Fiscal Year 1981-82. Assessments may be levied as early as July, 1981 with collection occurring in November, 1981 and April, 1982 with the regular tax collection.

COST TO IMPLEMENT BENEFIT ASSESSMENT

To implement the benefit assessment under AB 549, the District would incur the following categories of expenses:

- Assessor data acquisition costs (annual)
- Data augmentation and verification costs (annual)
- Assessment roll generation costs (annual)
- Assessment collection costs (annual)
- Election costs (one time)

Data Acquisition Costs

Besides the data needed to determine individual assessments by the assessment formula (land use parcel sizes in acres, land uses and Assessor parcel numbers), additional data is needed to generate the required assessment roll for public display annually. This additional data will likely include street addresses, property owner's names, tax code areas and flood control zones. For public utilities (the assessments for which would be collected by the State Board of Equalization), the public utilities identification number and State map number would be required.

Much of the above described information is available from the Assessor's master file and related County computer files (tapes).

The estimated District cost shown is what would be required to obtain tape copies and extracted data from the County.

Estimated Annual Cost: $1,500

Data Augmentation and Verificiation Costs

The data described above, which would not be readily available from Assessor computer files, would have to be manually generated by the District from other records. This cost has been estimated as follows:

Parcel Land Uses

Not all parcels have been inventoried by the County as to the current land use. A recent inventory of existing Assessor data shows that 1,470 parcels (of the 363,000 total) need to be identified as to present land use. The Assessor's Office staff advises us that their land use codes reflect actual land uses, so that we expect little additional effort needed beyond filling in the missing data and performing a spot check on some parcels. This could be expected to be needed annually.

Estimated First Year Cost: $25,000

Estimated Annual Cost: $15,000

Parcel Areas

Present Assessor records are not complete with respect to parcel areas. A recent inventory of Assessor records show that approximately 300 privately owned parcels and 806 public utility parcels (of the total 952 public utility owned parcels in the County) need to have the area in acres determined manually from record information. Annually, there will be some number of parcels requiring this effort. The task will be made considerably easier if a minimum size parcel is assumed for assessment purposes such as has been done by Alameda County. This would eliminate having to compute parcel sizes for those which are smaller than, say, 1/4-acre and which have a single family residential land use. The alternative is to compute all parcel areas and proportion assessments accordingly as is now done by the Los Angeles County Flood Control District. This method would be much more expensive than to adopt a minimum parcel size.

Estimated First Year Cost: $13,000

Estimated Annual Cost: $11,000

Assessment Roll Generation Costs

AB 549 requires that the Board of Directors shall have a written report, containing a description of each parcel and the amount of assessment for each parcel before the required public hearing at which time the Board may "adopt, revise, change, reduce or modify" any assessment.

Los Angeles County Flood Control District accomplished the requirement for making available the amount of each assessment by publishing in the newspaper, with the Notice for Hearing, the formula and rate by which anyone may compute his/her own assessment.

Alameda County Flood Control and Water Conservation District, on the other hand, produced an actual printed assessment roll and made it available at various locations in the County before the public hearing. This is the recommended method.

The estimated cost to produce an assessment roll (estimated at approximately 8,300 sheets of computer printout for Santa Clara County) includes labor and materials, annually. Microfiche may be used to make distribution of the roll more manageable.

Estimated Annual Cost: $5,000

Assessment Collection Costs

The County Controllers office would charge a fee to collect the benefit assessment. The Controller estimates the fee would be approximately 1% of the assessment; however, considering the $7.2 million assessment being considered, District staff would explore ways by which the collection fee might be reduced.

Estimated Annual Cost: $70,000

Election Costs

Costs under this category include those for printing and mailing ballots and for the Spanish translation of the ballot measure. The charges for this would be due the Registrar of Voters

Districtwide Election

For a Districtwide election, a single ballot printing would be required. The estimated cost to the District is estimated at $.08 per each of the estimated 650,000 registered voters in the District in 1982. For a special election, the cost would be approximately $.65 per voter.

Estimated One Time Cost: $ 52,000

Estimated One Time Special Election Cost: $425,000

Zone Elections

If a separate election is held in each zone, no additional costs are incurred in printing the five separate ballot measures and segmenting the vote and vote tally. The estimated cost to the District is again estimated to be $.08 per registered voter.

Estimated One Time Cost: $52,000

Total Costs

Total Estimated First Year Costs:	$114,500
Total Estimated Second Year Costs, including election:	$154,500
Total Estimated Annual Cost after election	$102,500

OTHER CONSIDERATIONS

The following need to be considered before a benefit assessment is implemented by the Santa Clara Valley Water District under AB 549:

Are the proposed assessments reasonable?

It is believed that an average single family residence assessment of about $12 per year ($1.00 per month) would be reasonable. By zone, this assessment would range from $7 per year to $12 per year. Undeveloped parcels would have a lesser rate and high density residential and commercial/industrial parcels would have a higher rate.

Should the required election be held in June, 1982 as part of the primary ballot or should it be held sooner?

Under the authorizing statute, the Board has the option of implementing, collecting and keeping one year's assessment, but must put the issue before the voters within one year as to whether to be allowed to continue assessing. Consolidating with the June, 1982 ballot would cost the District an estimated $52,000 ($.08 per registered voter). The Board may wish to implement the assessment by special election before June, 1982. To bring it before the voters sooner than June, 1982, a special election for this single purpose of benefit assessment would be required and would cost an estimated $425,000 ($.65 per registered voter). The June, 1982 election is recommended.

Should the District's ability to annually raise assessments be limited to the rise in the Consumer Price Index (as did Alameda County) or should it be open-ended (as in Los Angeles County)?

Limiting annual increases to the Consumer Price Index may be more appealing to voters. Having such a limitation, however, would not permit emergency funds to be raised for unforeseen needs. It is recommended that the annual assessment not be tied to a limitation on future increases such as the Consumer Price Index. Annual needs will grow faster than inflation because of the annual increase in maintenance needs resulting from new construction. Also, in the event presently anticipated federal projects should not be successful, an assessment tied to an annual limit on increases would restrict the District's ability to fund those projects.

Should the District levy a minimum assessment to all parcels of some minimum size (say .25 acre, as was done by Alameda County) or shall the assessment be spread to all parcels in proportion to actual parcel sizes (as was done by Los Angeles County)?

The issues are:

Cost

It would be more expensive to determine actual parcel areas of all parcels rather than inventorying parcels of say .25 acre or larger.

Equity

It may be more equitable, however, to owners of smaller parcels to assess them in proportion to their actual size rather than charge them the rate of larger (.25 acre) parcels. Considering the relatively small annual assessment being considered, the inequity may not be great. The voters may be more attracted to an assessment spread over all parcels in proportion to true parcel areas.

It is recommended that the minimum parcel size be set at .25 acre.

Should land use information used for generating parcel assessments rely upon existing Assessor records solely or should field verification be made on some or all parcels?

The issues are:

Cost

Checking and verifying each and every parcels' land use (363,000 total parcels would entail great expense and time.

Accuracy

To ensure a fair assessment, some level of field verification of Assessor land use records is recommended.

It is recommended that the Assessor's data be relied upon with a minimum level of field verification.

Are the runoff factors chosen for use in the assessment formula reasonable? (Board must approve these)?

Runoff factors figure in the assessment formula in that they determine the relative assessment rate (because the runoff factors describe the relative runoff rate) between the various land use categories (residential, commercial/industrial, agricultural, etc.). Alameda uses five land use categories with five different runoff factors. Los Angeles uses eleven land use categories and runoff factors. Considerable judgement enters into assigning relative runoff factors among land uses and, hence, much diversity of opinion exists as to these. If the Board decides to go ahead with a benefit assessment program, staff will need to design a refined schedule of runoff factors to accurately reflect land uses in Santa Clara County. For purposes of this preliminary report, we have utilized those of Alameda County as shown below.

Land Use	Runoff Factor
Commercial/Industrial	.8
Apartments/Institutions	.6
Single Family Residential and Small Multiple (2-4 units)	.4
Disturbed Rural: Vacant or Utilized Agricultural, Salt Ponds	.005
Undisturbed Agricultural: Marsh and Wetlands	.003

Final recommendations on runoff factors will be made before the public hearing in June, 1981.

CONCLUSIONS AND RECOMMENDATIONS

A major flood threat continues to exist in Santa Clara County. Flood control tax revenues aimed at eliminating this threat were reduced by approximately 55% by passage of Proposition 13, in 1978.

Solutions are still needed to reduce and eliminate this flood threat which today could cause over $400,000,000 in damages (from the one percent flood). Funds are badly needed to continue construction of flood control facilities and to protect the taxpayers' investment in the more than 306 miles of flood control channels and related facilities which have been constructed in past years, through an adequately funded maintenance program.

The following course of action is recommended:

1. Levy a benefit assessment in the amount of $7.2 million the first year.
2. Levy the assessment by action of the Board in July, 1981 for collection of the first assessment in November, 1981 and April, 1982.
3. Consolidate the required confirming election on the June, 1982 primary election ballot presenting the Districtwide electorate the question whether to continue levying a benefit assessment for flood control purposes.
4. While the election would be Districtwide, the first year assessment rates would be uniform in the Central, East and South Zones and would be less in the Northwest and North Central Zones to reflect their bond tax surcharge.
5. Land use information used to generate the assessment role would rely upon existing Assessor's records with a minimum level of field verification.

6. Staff should be directed to begin developing the required assessment roll for the Board's July 1981 consideration described in Number 2 above. Even assuming a minimum level of data generation and verification, three technicians and one engineer will need to be diverted for about two months to produce the report and generate the assessment roll. Data Processing Division staff would have a major role.

7. A minimum parcel size of .25 acre would be utilized. Parcels smaller than that size would be assessed at rates paid by .25 acre parcels.

8. Beginning in Fiscal Year 1981-82, present Predesign Division staff would need to be increased by five engineers to a 10 person division. The Senior Engineer position would need to be filled at that time.

9. Beginning in Fiscal Year 1981-82, Ordinance Administration and other Administrative Projects would be funded from a 5-zone combined fund, the source of revenue for which would be the District's tax allocation.

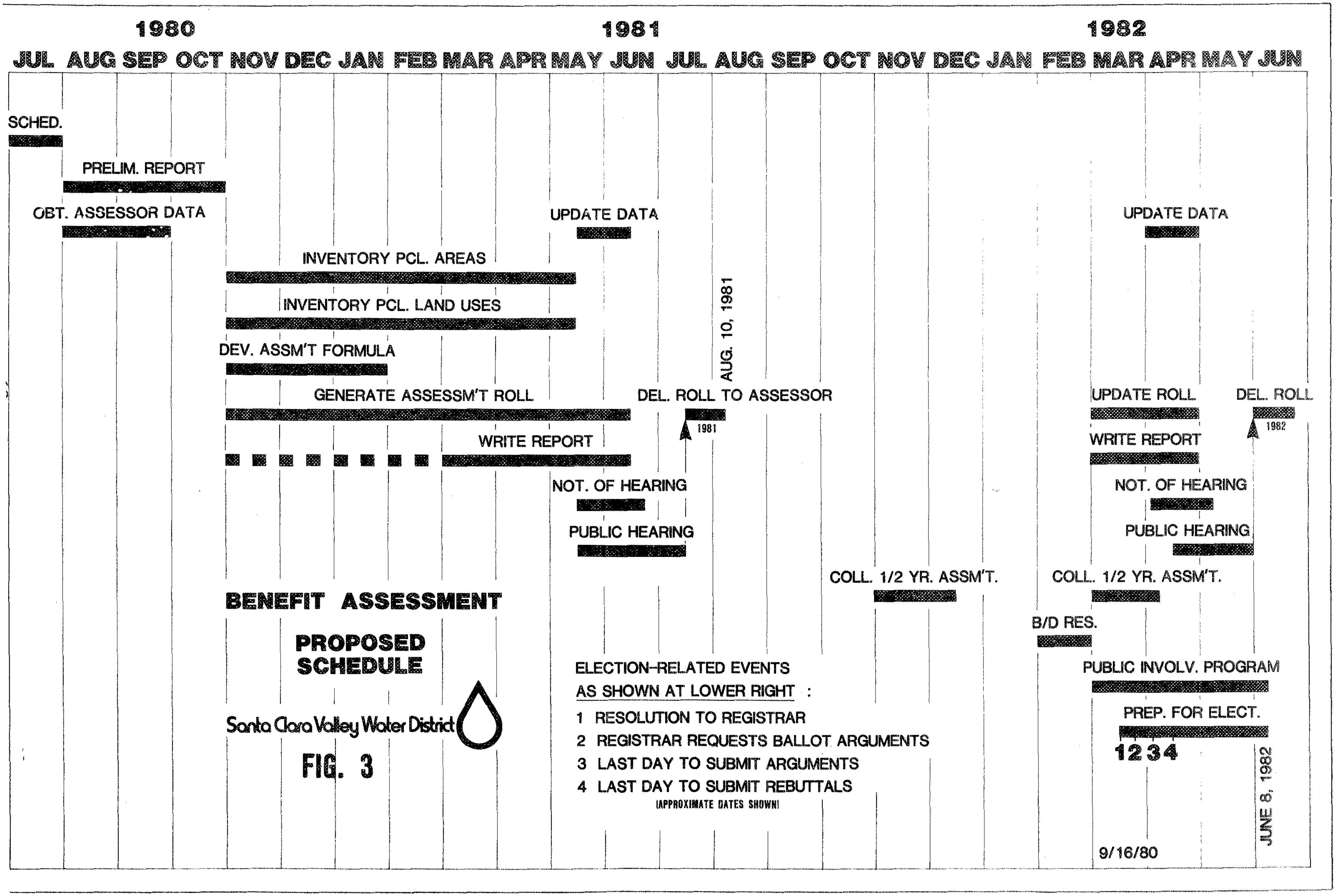
SCHEDULE

A schedule to augment District flood control tax revenue by an amount equal to the deficit which will occur in Fiscal Year 1981-82 is dictated by the Auditor-Controller's requirement that the assessment roll be received by him no later than August 10, 1981. This permits the following schedule:

June 16, 1981	File report and publish notice of hearing
July 7, 1981	Public hearing. Adopt the assessment by resolution
August 10, 1981	Deliver assessment roll to Auditor-Controller
June, 1982*	Confirming election

Figure 3 shows by means of a bar chart a proposed implementation schedule.

*An alternative would be to schedule a special election at some earlier date. Because of the cost involved, this is not recommended.



BENEFIT ASSESSMENT

PROPOSED SCHEDULE

Santa Clara Valley Water District

FIG. 3

ELECTION-RELATED EVENTS AS SHOWN AT LOWER RIGHT :

1 RESOLUTION TO REGISTRAR
2 REGISTRAR REQUESTS BALLOT ARGUMENTS
3 LAST DAY TO SUBMIT ARGUMENTS
4 LAST DAY TO SUBMIT REBUTTALS

(APPROXIMATE DATES SHOWN)

9/16/80